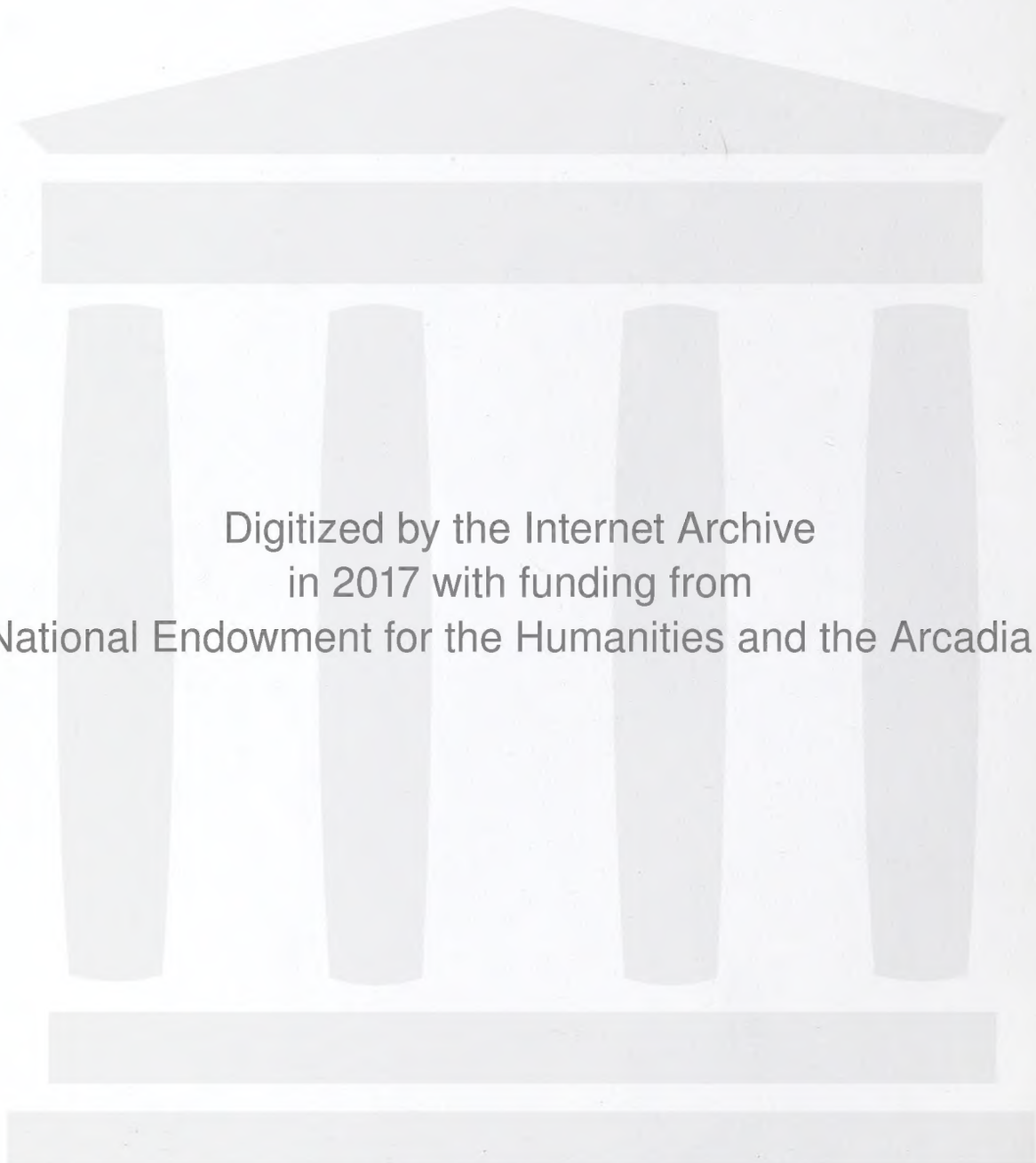

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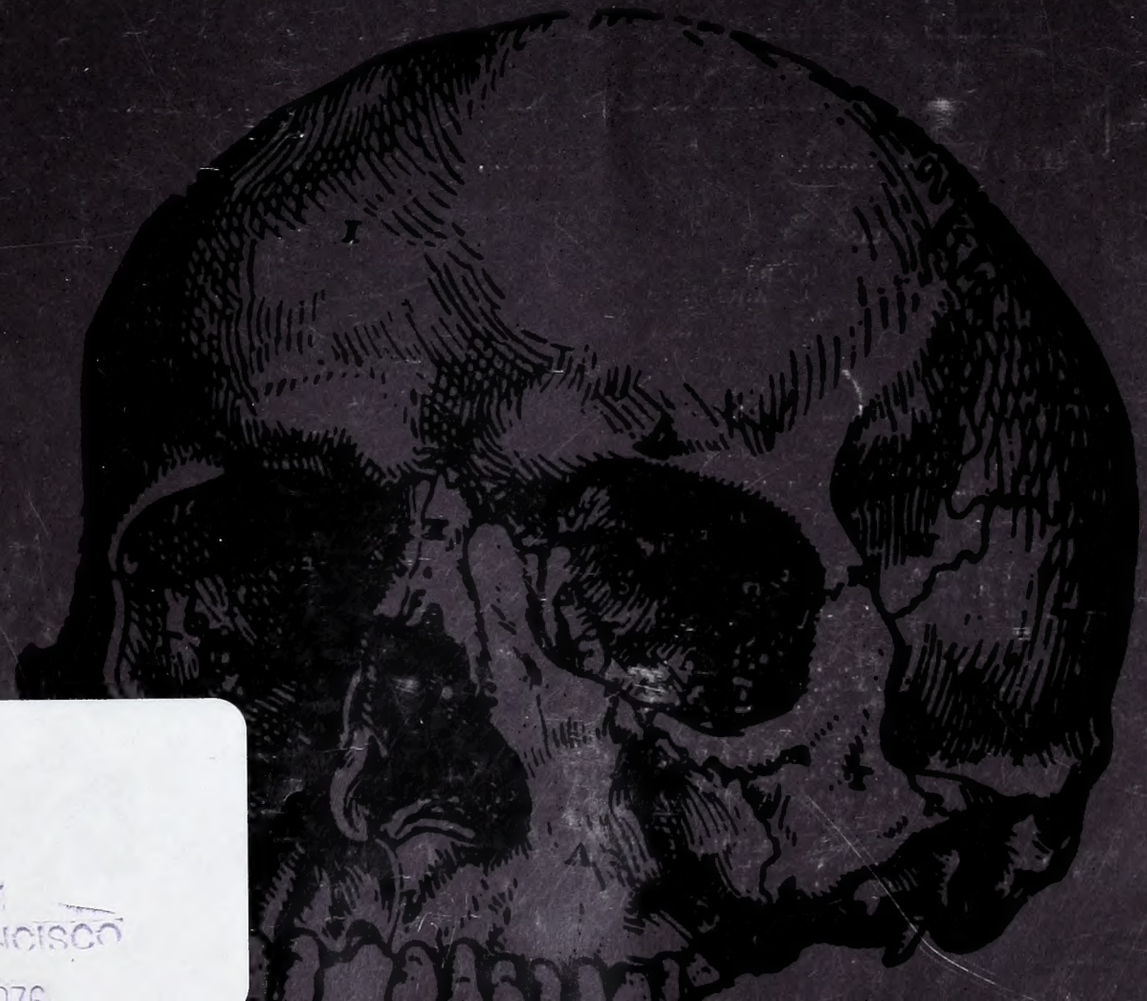
Jan76 TexasMedicine

Asbestos: Tyler's time bomb
Lead from El Paso smelter emissions
Ornithosis in Texas poultry plants
Medical examiners announce guidelines on PAs
Conference on legislation and medical service
Pauline Duffield, head librarian, retires

as·bes·tos (ăs bĕs′təs, ăz-), *n.* **1.** *Mineral.* **a.** a fibrous amphibole, used for making incombustible or fireproof articles. **b.** the mineral chrysolite, similarly used. **2.** a fabric woven from asbestos fibers, used for theater curtains, firemen's gloves, etc. **3.** *Theat.* a fireproof curtain. Also, **as·bes′tus.** [t. L, t. Gk.: unquenchable; r. ME *asbeston*, t. OF] —**as·bes·tine** (ăs bĕs′tĭn, ăz-), *adj.*



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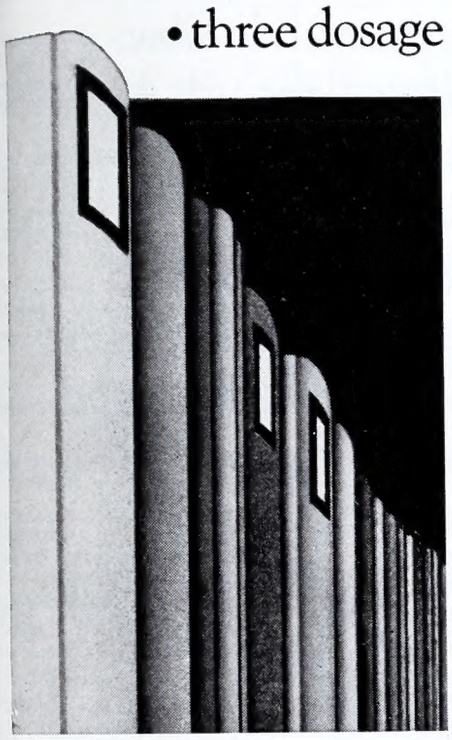

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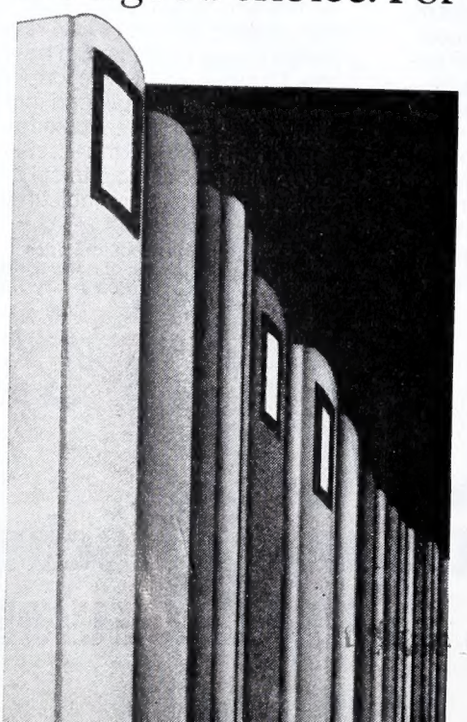

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ON THE COVER

Asbestos is a useful mineral and a lovely one as well. It is also dangerous. Articles on pages 39 and 149 tell of the effects of asbestos on inadequately protected industrial workers in a Texas plant. Other industry-related health hazards considered in this issue are lead from smelter emissions in El Paso, and outbreaks of ornithosis among poultry processing plant workers in Texas.

NEXT MONTH

Topics for February will include the family and physical illness, local complications in Geometric total knee arthroplasty, colposcopy as an office procedure, use of autosutures in gastrointestinal surgery, technetium stannous pyrophosphate myocardial scintigraphy, and maintenance of a functional ear drum in tympanoplasty procedures.

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Legislative and medical service topics set for TMA conference

The 1976 Texas Medical Association's Conference on Legislation and Medical Service is set for Jan 17 at the Joe C. Thompson Conference Center in Austin.

Keynote speaker for the conference will be Richard L. Lesher, PhD, of Washington, D C. Dr. Lesher is president of the Chamber of Commerce of the United States. He will speak on the topic, "Can Capitalism Survive?"

Other featured guest speakers will present insights on various national legislative issues. Rep J. J. Pickle of Austin, a member of the House Ways and Means Committee, will discuss congressional issues, especially those facing the powerful Ways and Means Committee.

Proposed legislative actions relating to medical manpower and medical education will be covered by Dr. Tom E. Nesbitt of Nashville. Dr. Nesbitt serves as speaker of the House of Delegates of the American Medical Association.

The prospects for national health insurance legislation in 1976 will be addressed by Dr. Edgar T. Beddingfield of Wilson, NC. Dr. Beddingfield is chairman of the AMA's Council on Medical Legislation.

In addition, the upcoming conference will include panel sessions and updated reports on professional standards review organizations, the role of TMA in easing or resolving the professional liability insurance crisis in Texas, achieving maximum effectiveness on issues before the Congress and Texas Legislature, and the association's multifaceted approach to representing physicians on issues which impose economic restraints upon them.

A series of Curbstone Consultations, informal discussion sessions, will conclude the program.

Registrants will be guests of TMA for luncheon; the Texas Employers Insurance Association will host a cocktail party at the conclusion of the conference.

The conference is open to all members of the Texas Medical Association. Personal invitations are being extended to presidents, presidents-elect, and secretaries of county medical societies, and chairmen and members of Legislative Committees of county medical societies and the Woman's Auxiliary.

There will be an Orientation Program for new members of the association. In addition, TMA boards, councils, and committees will meet the weekend of the conference.

Report analyzes distribution of Texas physician population

The Texas Medical Association has just released its report *Distribution of Physicians in Texas 1973*, the second in a planned annual series of publications on the physician population of Texas.

The report analyzes in detail several variables relating to physicians in the state including major professional activity, specialty, age, sex, and place of medical education. The data presented in the report were developed from special tabulations of the American Medical Association Physician Masterfile, 1973, which is maintained by the AMA Center for Health Services Research and Development.

According to an overview of the non-federal physician population in Texas as of Dec 31, 1973, there were 14,717 non-federal physicians in the state. Of these, 13,394 were active and classified by major professional activity and specialty; 491 were not classified by major professional activity; and 832 were inactive. Of the 13,394 active and classified physicians, 10,467 (78.1%) were in direct patient care; 1,980 (14.8%) were in graduate training; and 947 (7.1%) were in non-patient care activities. By major specialty group, 2,808 (21%) were in general practice; 3,190 (23.8%) were in the medical specialties; 4,135 (30.9%) were in the surgical specialties; and 3,261 (24.3%) were in other specialties.

The largest percentage of all physicians (21%) and the largest percentage of physicians in office-based practice (26.9%) designated general practice as their primary specialty. The six largest specialties, accounting for 60.8% of all non-federal Texas doctors, include general practice, internal medicine, general surgery, obstetrics/gynecology, pediatrics, and psychiatry.

The report also indicated that there were 744 active and classified non-federal female physicians in Texas, or 5.6% of all non-federal physicians as of Dec 31, 1973. The number of female physicians increased by 63 (9.3%) between 1972 and 1973. The report's findings showed some significant differences in the percentage of all males and females in certain specialties. Specifically, a significantly higher percentage of all females than males were in pediatrics, anesthesiology, psychiatry, and pathology. In comparison with males and with the percentage of all non-federal physicians who were female, females were overrepresented in the medical and the other specialties,

NEWS

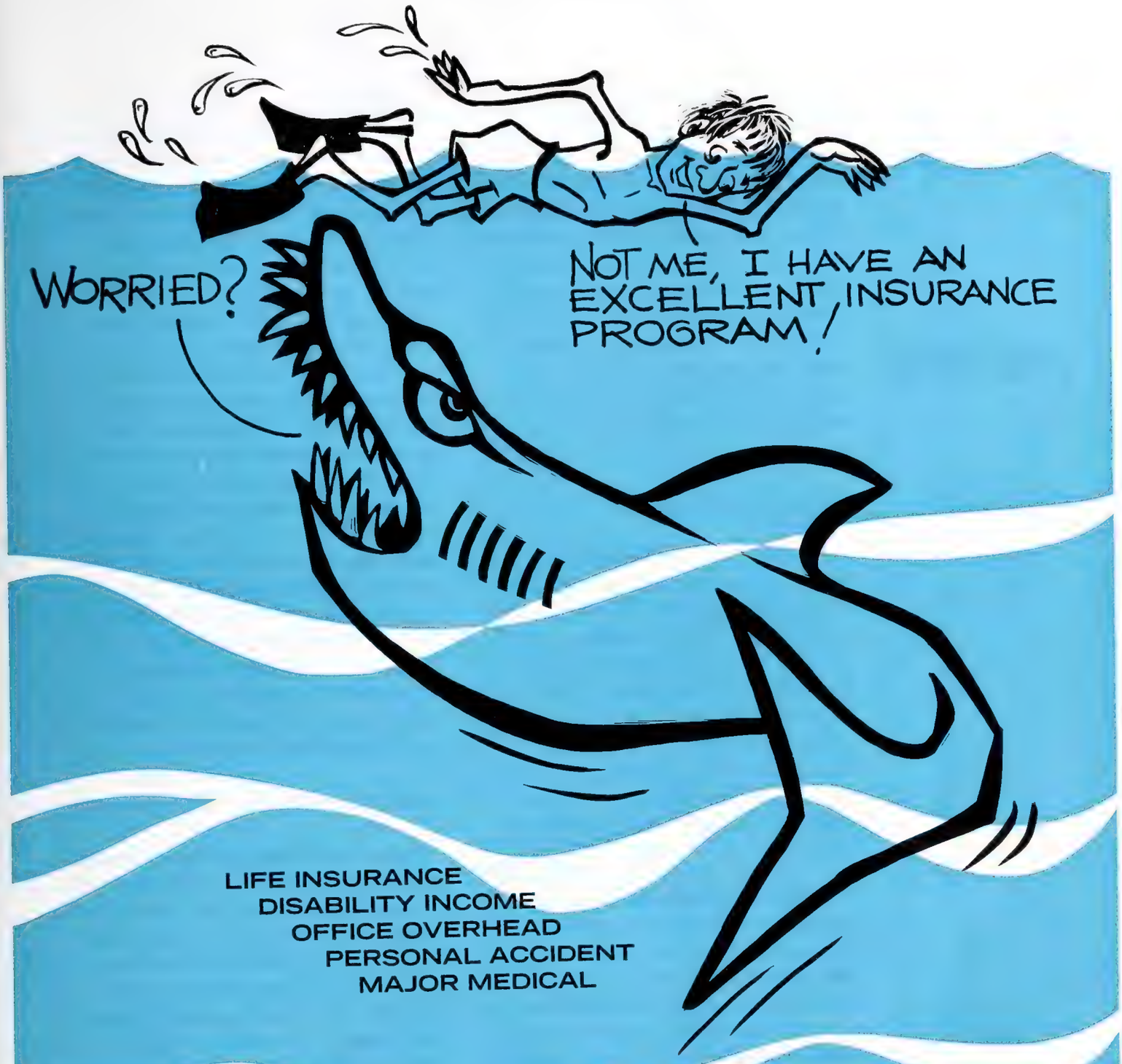
underrepresented in general practice and the surgical specialties, and were concentrated in fewer specialties.
In regard to medical education, the report showed 11,630 (86.8%) of the 13,394 active and classified non-federal physicians in Texas to be graduates of United States medical schools. Medical schools in 39 states and 70 foreign countries have contributed physicians to Texas. Graduates of Texas medical schools numbered 6,253 (46.7%) of the Texas physician population.
Approximately 450 copies of the report will be distributed to health related and health care planning groups within organized medicine, state and regional governmental units, medical schools, the regional office of the Department of Health, Education and Welfare, Blue Cross-Blue Shield, and others.

Delegates scrutinize current medical issues

Major medical issues of the day came under close scrutiny by the Texas Medical Association's House of Delegates Nov 8-9 in Austin. Policy decisions were made on a wide range of recommendations presented by ten reference committees.
Among its actions, the House of Delegates approved a resolution which proposed that it be considered ethical for a physician to bill a Medicaid patient on a personal basis for usual, customary, and reasonable fees for their professional services, in lieu of accepting assignments under the Medicaid Program. The delegates further requested that the Council on Tax-Financed Health Care review this action to pursue any appropriate legislative action to provide physicians this option.
In its report, the Reference Committee on Professional Insurance reviewed for the delegates recent activities of TMA in its efforts to effect a solution to the professional liability insurance crisis in Texas. The house also gave its wholehearted support to the two physician members of the Medical Liability Study Commission and promised patience in awaiting the commission's report.
In the area of government health programs, the delegates reviewed current problems involving health planning, economic restraints, Medicare, Medicaid, sterilization procedures, nursing homes and home health care, physicians' fees, social security administration, professional standards review organizations, the privacy act, uniform claim forms, length-of-stay criteria, refund request letter, and other issues.
In regard to the Privacy Act of 1974 and its impact on medical practice, it was pointed out that most of the burden to keep information private is on federal agencies and intermediaries. An individual patient may request access to his own information in federal files and be given access if the information is not considered dangerous to give; for example, disability examinees might have access to their state and federal files.
The delegates received information on a TMA survey designed to accumulate data on the costs physicians incur in the operation of their practices. The survey is scheduled to be mailed during January.

Education/legislation

The House of Delegates approved the concept of full funding of residencies in the state and the development of an adequate number of residencies for medical school graduates in the state. In this regard, the delegates approved the recommendations reported in the December issue of *Texas Medicine*. In addition, the delegates endorsed full funding for undergraduates in the Texas medical schools so that existing programs may expand to their full capacities.
Proposed legislation continues to be



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a topic of current interest to the delegates. The house expressed its opposition to proposed health manpower provisions which would place the number and location of medical residencies under federal control and require that all medical students repay the government for federal aid to medical schools.

In their discussion of legislative issues, the delegates reaffirmed their recognition of TEXPAC as the political arm of the association and urged member support of the program.

Fee collection guidelines

The House of Delegates adopted guidelines for hospital-based physicians' fee collection. This reaffirmed a position previously approved by the Board of Councilors that separate, direct billing of the patient by the physician is the most acceptable and desirable arrangement for hospital-based physicians. The delegates set forth the following items for establishing such a legal and ethical practice:

*Each item of the professional component of each service must be listed on the patient's bill and identified clearly. This must be done in percentage contracts and other types of legally acceptable contractual arrangements between the physician and the hospital. A fee schedule must be established by each individual hospital-based physician for services rendered.

*Professional fees so collected must not be comingled with hospital funds.

*A charge may be made for the collection of these professional fees. The collection fee should be at a rate commensurate with the cost of accounting or secretarial services for accounts receivable billing; not at a rate for accounts turned over for collection as a bad debt.

Association dues

A uniform dues policy for all categories of membership for physicians who join TMA after July 1 of each year was adopted by the delegates. This provides a uniform procedure for counties and encourages physician participation. Members joining component county societies after July 1 shall pay only one-half of the TMA dues for that year. In the interest of uniformity, the delegates also approved a recommendation that dues for physicians on leave-of-absence status be increased from $5 to $10. The change would place dues for military, intern, resident, and leave-of-absence members at $10 and would add a subscription to *Texas Medicine* for those on leave-of-absence. The delegates instructed the Council on Constitution and Bylaws to draft the necessary bylaws amendment to effect this change.

Other actions

An amendment was approved relating to the professional role of licensed physicians. This resolution stated that in the delivery of professional medical care, it is illegal, unethical, and contrary to quality health care for the physician to allow a nonphysician to direct patient care or otherwise interfere with the physician-patient relationship.

In addition, the delegates adopted an amendment which proposed that TMA work in concert with the Texas Department of Health Resources to initiate a program to humanize and maximize the understanding and the handling of the sudden infant death syndrome in Texas. Testimony before the Reference Committee on Scientific Activities pointed out that there is a need for all physicians to recognize that the sudden infant death syndrome actually exists, that pathologists should not feel a specific obligation to find an actual cause of death

because in the true syndrome, nothing should be found, and that there is an increasing need for qualified and interested pathologists to perform these autopsies.

Recognitions

The delegates commended both Pauline Duffield, former librarian, and Max Jones, former TMA business manager, on their long-time service to the Association. Mr. Jones retired from the association in September after 22 years of service; Miss Duffield retired in December following 23 years of service.

Appreciation was expressed to Dr. Andres Goth, professor and chairman of pharmacology at The University of Texas Southwestern Medical School at Dallas for his time and expertise in reviewing all materials published in the Federal Register relating to proposed regulations by the Food and Drug Administration.

Recognition was also extended to Dr. Stanley J. Dudrick of Houston who received the Brookdale Award in Medicine from the American Medical Association and to students from Baylor College of Medicine who won the annual Texas Medicine Award for excellence in scientific writing.

TMA publishes directory for continuing education

The Texas Medical Association has announced the publication of its *1976 Texas Continuing Education Directory for Physicians*. The sixth annual edition of the directory is scheduled to be mailed to all TMA members in early January.

This year's directory includes 166 continuing education courses, 10 courses which are held on a regular basis throughout most of the year, and a listing of 1976 meetings of 41 Texas medical organizations. The directory has greatly expanded since its first edition which included 43 courses.

Updated listings of continuing education courses will continue to be listed throughout the year in the "Continuing Education" column in the journal.

Speakers scheduled for Annual Session

The Texas Medical Association's Annual Session program, May 6-9 in Dallas, will be expanded this year by American Cancer Society (Texas Division) and TMA Committee on Cancer cosponsorship of five well-known and knowledgeable guest speakers.

The speakers include Drs. Oscar Auerbach, East Orange, NJ; Milton Boniuk, Houston; Edwin R. Fisher, Pittsburgh; Edgar L. Frazell, San Antonio; and Cushman D. Haagensen, New York.

Dr. Auerbach, senior medical investigator at East Orange's Veterans Administration Hospital, is widely recognized for his work in the field of chest disease and the effects of smoking. His assignments during the TMA annual meeting include talks on "Development of Pulmonary Emphysema" and on "Smoking and Cancer." Dr. Auerbach's work, which spans nearly 50 years, includes authorships and co-authorships of 120 papers, teaching assignments at various medical colleges, consultant appointments, as well as numerous honors and awards for his research.

A specialist in ophthalmology and ophthalmic pathology, Dr. Boniuk has taught at Baylor College of Medicine since 1961. During this time, he has published some 50 papers and made some 170 presentations. A former president of the Houston Ophthalmological Society, Dr. Boniuk has served on the editorial boards of several medical publications. He has also worked extensively with the National Institute of Neurological Diseases and

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Blindness. Dr. Boniuk will speak before the Section on Ophthalmology on the "Conservative Management of Uveal Melanomas."

An expert on breast cancer, Dr. Fisher will address the Section on Surgery on "Newer Concepts of the Pathology of Breast Cancer." He will join Dr. Haagensen in discussing "The Controversy Over the Treatment of Operable Breast Carcinoma" during the Continental Breakfast program. Dr. Fisher will also participate in a panel session concerning breast cancer.

Professor of pathology at the University of Pittsburgh, Dr. Fisher presently serves as chief pathologist on the National Surgical Adjuvant Breast Project with the National Cancer Institute. He is a consultant reviewer with the American Heart Association and on the Board of Scientific Advisors of the Cancer Research Center at the Ellis Fischel State Cancer Hospital in Columbia, Mo.

An expert on head and neck tumors, Dr. Frazell will speak to the Section on Surgery during the 1976 session. His work includes extensive experience at the Memorial Hospital in New York City on salivary gland and thyroid tumors.

Finally, Dr. Haagensen will make a presentation to the Section on Family Practice regarding "Methods of Diagnosis of Breast Disease and When to Operate." He will also participate in two discussion sessions on the subject of breast cancer. A foremost authority on breast cancer, Dr. Haagensen is associated with the Columbia Presbyterian Medical Center in New York.

Correction

Dr. Elmer E. Cooper has notified the editors of an error in his article, "Aspirin and Myocardial Infarction Study," in the October 1975 issue, page 84, paragraph 7. Ages of patients in the study will be 30 through 69 years rather than 39-69.

TMA produces public service spots

The Texas Medical Association's Communication Department has produced four public service announcements to be aired by Texas radio and television stations throughout the coming year.

The 30-second announcements feature the topics of volunteer blood donations, self-pollution (smoking, alcohol and drug abuse, and obesity), high blood pressure, and prenatal care.

Produced under the direction of the Council on Communication and in cooperation with the Texas Association of Broadcasters, new announcements will be released every 90 days. The message on blood donations, released in mid-November, will be followed by the spot about self-pollution.

"The Gift of Life," a booklet promoting volunteer blood donations, is available to supplement the message to the public. Free, limited quantities can be obtained from the Communication Department, TMA, 1801 N Lamar Blvd, Austin 78701.

This is the second such public service announcement campaign undertaken by TMA in cooperation with the TAB. The initial campaign in 1973 received good reception from the public and Texas broadcasters.

"How would you like to star in a movie?"

Study commission continues deliberations

The Medical Professional Liability Study Commission conducted four days of meetings during November to continue deliberations on the malpractice issue.

At one session, Joe Christie, chairman of the State Board of Insurance, cited some preliminary findings of a claims study by the National Association of Insurance Commissioners. The study showed that 86% of the number of claims by adults are reported within two years after the initial incident. Claims against doctors constituted 64% of all claims. Hospitals and emergency rooms were the sites for 78% of the claims. Mistakes in procedure were cited in 56% of all claims against doctors with more than half of that number involving procedures which were allegedly improperly performed. Alleged mistakes in diagnosis made up 26% of the claims. The preliminary NAIC study was based on 1,200 claims.

The study commission also heard a joint underwriting association (JUA) report which showed that 158 doctors and seven hospitals had taken JUA professional liability coverage as of Oct 31.

A report was also received on the Board of Medical Examiners' policing efforts and its need for additional personnel to expand operations.

At the final November session, commission chairman, Page Keeton, said he felt that the problem will not be solved by changes in the medical liability insurance rate-making procedures and policy forms alone. He called the quality control of doctors and hospitals the "obvious area of importance." He also said the commission planned to study the court system prior to making any recommendations regarding a solution to the problem.

The next meeting of the commission was scheduled for Dec 19.

Health testimony given at White House forum

Testimony before the White House Forum on Domestic Policy Nov 11 in Austin covered a broad range of current national issues including health policies. Representing the medical profession at this public meeting conducted by Vice President Nelson Rockefeller and cabinet officials were Drs. Milton Davis of Dallas and Mario Ramirez of Rio Grande City.

Dr. Davis addressed his remarks to the impact of certain federal laws and programs upon the delivery of health care. He pointed out the various factors which deter health care to the underserved including harsh federal requirements, service restrictions, fee differentials, and economic restraints.

"At a time when physicians are being forced to practice 'defensive medicine' to avoid legal jeopardy," Dr. Davis stated, "restrictions on outpatient services can make it unsafe even to see welfare and certain other patients."

The Dallas physician warned against political promises which overlook fiscal realities. He stated, "Nearly all of the public dissatisfaction with federal health care programs is related to the public's not getting something they thought they were getting, usually because of cost restrictions."

He urged the federal government not to disregard established entities within the health care system. He cited as an example the Department of Health, Education and Welfare's development of their own set of diagnosis, disease and operation coding when Current Procedural Terminology (CPT) exists and has been shown to be workable.

Dr. Davis also touched upon the areas of federal control and standardization of federal health programs, the duplication of programs, and federal regulatory procedures.

In closing his testimony, Dr. Davis

★

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A strong academic foundation is essential to successful higher education. Will his educational needs be met locally? If you have any doubts, and many parents do, we invite you to consider a boarding school. Asheville School provides an atmosphere in which academic excellence is expected — and respected. We can help your son fulfill his dreams — and your dreams for him. For information write:

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Asheville, N. C. 28806

presented the forum's participants several recommendations by which government could reduce, consolidate, and improve the administration of federal health programs.
His recommendations suggested that government should 1) stop equating standardization and controls with quality, 2) enlist the cooperation of the private sector, 3) utilize time-proven vehicles, 4) retain confidentiality of patients' records, 5) use as little compulsion as possible, 6) review and amend statutes and regulations which tend to concentrate outpatient services in institutional settings, 7) critically evaluate new and untried programs, 8) require federal officials to seek cooperation from the voluntary sector as a policy of the administration of federal departments, and 9) minimize the effects of inflation on health care costs by amortizing the public debt and gradual elimination of deficit financing.
A different perspective on the problems of health care costs and delivery was presented by Dr. Ramirez who testified before a session chaired by Secretary David Mathews of the Department of Health, Education, and Welfare.
Dr. Ramirez told the group of his involvement with the American Medical Association's Committee on Health Care of the Poor and the problems of the poor in his home area in South Texas. Dr. Ramirez said that of the approximately one million migrant farm workers in America, half come from Texas, and over half of these come from his part of the state.
While the government has tried to help with grants and migrant health clinics, Dr. Ramirez said that much of the money goes for administrative costs and too little actually goes for health care. Another problem of the migrants is that continuity of care cannot be provided under most circumstances.
According to Dr. Ramirez, an insurance policy, such as is available to Medicaid recipients, would help solve the migrant problem. He cited a pilot program being conducted by the Laredo-Webb County Health Department which is proving to be a resounding success.
With regard to national health insurance, Dr. Ramirez expressed the hope that the government would not undertake a prohibitively expensive program. He added, "We all agree that some type of assistance is needed, possibly complete coverage for the medically indigent, partial assistance for others dependent on their needs, and catastrophic coverage for all through mechanisms that are mutually acceptable. Prior to these undertakings it would seem to me that we should educate our nation with regard to basic health care and with regard to our health resources and the wise utilization of same. There is a tremendous vacuum to this regard both amongst the young as well as amongst the older."
Dr. Ramirez also included in his testimony an account of the escalating costs of health care in small communities in particular due to the requirements of government programs and other problems such as a shortage of doctors in certain areas.

PA rules adopted by board

The Texas State Board of Medical Examiners has issued physician's assistants rules and regulations as officially adopted by the board Nov 2.
Approval by the board to supervise a particular physician's assistant must be obtained by each proposed supervising physician by filing an application with the board on forms provided by the board.
According to the rules, a patient must give written consent for any medical services rendered by the physician's assistant. In addition, a notice is to be posted in the supervis-

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ing physician's office explaining the term "physician's assistant" and the functions of the position. The assistant must wear a name tag with the designation "physician's assistant" so that the assistant is not mistaken for a licensed physician.

The board ruled that there should be no separate billing for the services of the physician's assistant as these services shall be considered part of the total services of the physician.

The regulations also set forth guidelines for the supervision of the performance of a physician's assistant by the licensed physician and other details regarding the employment of the assistant.

Duties which the physician's assistant may perform, as set forth by the regulations, include those which do not require the exercise of independent medical judgment, as assigned by the supervising physician who is responsible for the performance of such tasks and who retains direct control and supervision of the physician's assistant.

The physician's assistant is not allowed to: 1) perform any task or function without the supervising physician being either physically present or immediately available to provide further guidance, except in life threatening emergencies; 2) make a final or definitive diagnosis of a disease or ailment or the absence thereof independent of the supervising physician; 3) independently prescribe any treatment or a regimen thereof; 4) prescribe, order or dispense medication, or sign prescriptions on behalf of the supervising physician, or have prescription blanks available that have been presigned or stamped by the physician, or order the refilling of a prescription, except as authorized by other provisions of the law; 5) replace the supervising physician in making visits in the hospital, clinic, nursing home, emergency room or home; 6) independently initiate or change any orders on a patient's chart in hospitals, clinics, nursing homes or other places where patient charts are used; 7) treat any patient before the physician has seen the patient and ordered the method of treatment, except in life threatening emergencies; 8) maintain an office separate from the supervising physician; 9) perform acupuncture in any form; 10) independently delegate a task assigned to him by the supervising physician; 11) perform endoscopic examinations and/or procedures; 12) perform spinal punctures; and 13) list his or her name in any telephone directory or other directory intended for public use, utilizing the title "Physician's Assistant," "PA," or any other term that would indicate he or she is a physician's assistant.

TMA comments on standards for JCAH hospital manual

The Texas Medical Association, in a letter to Roger G. Olin, director of the Department of Hospitals and Health Facilities at the American Medical Association, has commented upon the proposed revised standards of the Medical Staff Section of the Joint Commission on Accreditation of Hospitals' Manual for Hospitals.

TMA expressed its concern that the responsibilities placed upon the voluntary medical staff chiefs of section may become so time-consuming and onerous that the staff physicians may be reluctant to assume this responsibility. In addition, TMA suggested that the section entitled "Staff Reappointment/Reappraisal" be reevaluated in order to clarify the responsibilities of the section chiefs who apparently must certify as to the mental and physical capabilities of every physician in the department.

It was suggested that the language section could be drafted to indicate that complete and detailed reappraisal of the physical and mental capa-

adjunctive therapy for wound debridement

HELPS TO REMOVE:

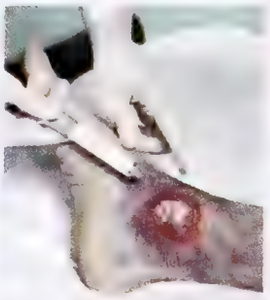
- Necrotic Tissue and Associated Odor

HELPS PREPARE WOUND FOR:

- Granulation/Healing
- Granulation/Grafting

CLEANSE WOUND
Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials.

THOROUGHLY MOISTEN
Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g., sodium chloride or water solutions).



APPLY ENZYME
Apply a layer of TRAVASE Ointment. Assure intimate contact with necrotic tissue and complete wound coverage.

APPLY MOIST DRESSING
Apply loose moist dressings (most important with dry leathery eschar).

CHANGE DRESSINGS
When changing dressing, gently wipe away the dissolved material. Repeat the procedure, including application of TRAVASE Ointment, 3 to 4 times per day for best results.

Travase® Ointment
brand of Sutilains

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES INC
Deerfield, Illinois 60015

Please see next page for prescribing information.

Travase Ointment brand of Sutilains

ulcers

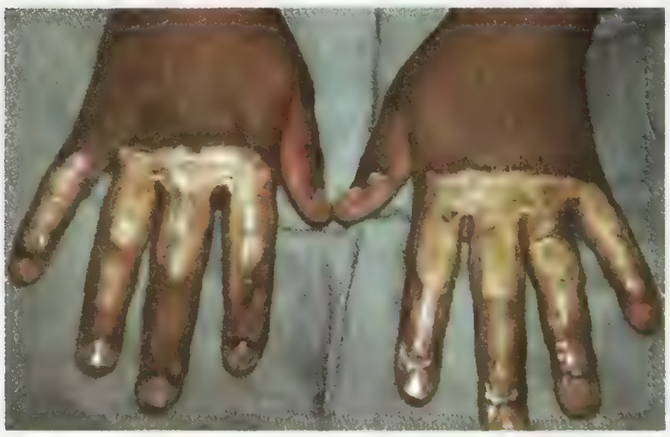
TERRY V. CARLE, M.D., CLINICAL INSTRUCTOR, DEPT. OF PHYS. MED. & REHAB., CRAIG REHABILITATION HOSPITAL, UNIVERSITY OF COLORADO

Before treatment, necrotic matter coated the inner surfaces of this decubitus ulcer.

After six days of TRAVASE therapy, debridement is nearly complete and granulation evident.

burns

DALE B. DUBIN, M.D., DIPLOMATE, AMERICAN BOARD OF PLASTIC SURGERY, TAMPA, FLORIDA



Before treatment . . .

48 hours following treatment with TRAVASE Ointment on right hand; left hand is control.

Travase® Ointment

(brand of Sutilains)

Indications: For wound debridement, TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:

- Second and third degree burns,
- Decubitus ulcers,
- Incisional, traumatic, and pyogenic wounds,
- Ulcers secondary to peripheral vascular disease.

Contraindications: Application of TRAVASE Ointment is contraindicated in the following conditions:

- Wounds communicating with major body cavities,
- Wounds containing exposed major nerves or nervous tissue,
- Fungating neoplastic ulcers,
- Wounds in women of child-bearing potential—because of lack of laboratory evidence of effects of TRAVASE upon the developing fetus.

Warning: Do not permit TRAVASE Ointment to come into contact with the eyes. If contact is made, immediately rinse with copious amounts of water, preferably sterile.

Precautions: A moist environment is essential to optimal activity of the enzyme. Enzyme activity may also be impaired by certain agents (see package insert). Although there have been no reports of systemic allergic reaction in humans, studies have shown that there may be an antibody response in humans to absorbed enzyme material.

Adverse Reactions: Consist of mild, transient pain, paresthesias, bleeding and transient dermatitis. Pain usually can be controlled by administration of mild analgesics. Side effects severe enough to warrant discontinuation of therapy occasionally have occurred.

If bleeding or dermatitis occurs as a result of the application of TRAVASE Ointment, therapy should be discontinued. No systemic toxicity has been observed as a result of the topical application of TRAVASE Ointment.

DOSAGE AND ADMINISTRATION: STRICT ADHERENCE TO THE FOLLOWING IS REQUIRED FOR EFFECTIVE RESULTS OF TREATMENT:

1. Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials which may denature enzyme or alter substrate characteristics (e.g., hexachlorophene, silver nitrate, benzalkonium chloride, nitrofurazone, etc.).
2. Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g. sodium chloride or water solutions).
3. Apply TRAVASE Ointment in a thin layer assuring intimate contact with necrotic tissue and complete wound coverage extending ¼ to ½ inch beyond the area to be debrided.
4. Apply loose wet dressings.
5. Repeat entire procedure 3 to 4 times per day for best results.

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bilities of a physician would not be required unless there had been received by the staff reports of changes or deterioration in physical or mental capabilities.
The TMA Committee on Hospitals will continue to monitor this situation.

Drug guidelines cited as example for professions

The Drug Enforcement Administration has recognized the Harris County Medical Society for its guidelines for prescribing amphetamines and barbiturates. The Society's guidelines are listed in the September issue of *Registrant Facts,* the quarterly publication of the DEA as an example of the kind of support the professions can give DEA.
The Drug Enforcement Administration encourages and supports the concept of self-regulation and voluntary compliance. This includes the adoption of prescribing guidelines by the various regulated professions which address themselves to problem areas not directly covered by regulations.
Harris County's amphetamine guidelines follow:
1. Recommend total ban on prescribing amphetamines and methamphetamines except in clearly recognized conditions where these drugs are indicated: narcolepsy and selected cases of hyperactive and brain damaged children.
2. Each physician is asked to examine individual prescribing practices to insure that all prescription orders for drugs with an abuse potential are written with caution.
3. Physicians should counsel patients receiving such medication that potential danger exists and every precaution should be made to keep such drug usage to a minimum.
4. Physicians are asked to make specific effort to insure that multiple prescription orders are not being obtained by the patient from different physicians.
In addition physicians in the medical society are asked to obtain detailed drug histories from all patients, to discourage patients from using barbiturates, other sedatives and hypnotics, and minor tranquilizers if satisfactory alternatives are available, to prescribe these drugs only when they are clearly indicated, and to limit sharply the size of prescriptions particularly of the intermediate-acting barbiturates (amobarbital, pentobarbital, secobarbital, and related drugs alone or in combination) and of non-barbiturate hypnotics.

Arthritis conference conducted

A 1975 Governor's Conference to focus on education and better understanding of patients with arthritis was conducted in Houston in late October by the Texas Rehabilitation Commission Counselors.
Attending the conference were 45 such counselors selected from over the state. A variety of speakers were secured for the meeting including rheumatologists, an orthopedic surggeon, a physical therapist, an occupational therapist, a social worker, a nurse, and labor and insurance representatives.
Conclusions reached by the participants of the meeting included the following:
1. Formal liaison work is to be carried out between each Arthritis Foundation chapter and each Texas Rehabilitation Commission Area.
2. The Texas Rehabilitation Commission counselors will be invited to each of the Arthritis Clinics not only to visit but to develop participation.
3. The Texas Rehabilitation Commission counselors have been invited to join the allied health professions sections of the Arthritis Foundation.
4. The AFL-CIO is encouraged to appoint a liaison person to work

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with the Texas Rehabilitation Commision to help retrain labor union members who develop arthritis and can no longer keep up the demands of their trade.

5. The Texas Rehabilitation Commission and the Arthritis Foundation need to strive to better educate employers regarding hiring practices of citizens with arthritis.

6. There needs to be improvement of disability insurance contracts to provide for the deserved goal of return to work on a part-time percentage basis.

Conference sponsored for minority students

Minority medical students from across Texas gathered at Baylor College of Medicine Nov 15 for a day-long seminar focusing on the opportunities and challenges facing minority physicians.

According to William G. Louis, Region III director of the Student National Medical Association (SNMA), which hosted the seminar, participants were introduced to the newly implemented SNMA Clinical Preceptorship Program funded jointly by the National Health Service Corps and the Office of Health Resources Opportunity.

"The SNMA has received a $100,000 grant to support six-to-ten week preceptorships for 75 minority medical students at any of the 40 Health Service Corps facilities in the United States," Louis, a second-year Baylor medical student, explained. "This new program provides a unique opportunity for minority students, and we are hopeful that the minority students from Texas' medical schools will take advantage of it."

In addition to discussing the National Health Service Corps program, participants learned about other SNMA programs. Also on the program was Dr. Shirley Marc-Brown, director of the Central Recruitment Council in Boston, who discussed the Boston Area Preceptorship Program, and Dr. S. Carl Harvey, member of Baylor College of Medicine's admission committee, who discussed minority admissions to medical schools.

"Beyond informing the participants about SNMA's programs and other opportunities," stated Louis, "we hope to increase their awareness of the need for more primary care physicians, particularly minority physicians, and to stimulate their interest in pursuing careers in this area."

Dr. Edward A. R. Lord, president of the Houston Medical Forum, addressed the group on "The Role of the Minority Physician in the Community," and Dr. Ronald Haley, a family practitioner and assistant professor of community medicine at Baylor, discussed "Primary Care and the Minority Physician."

Model letter developed

The Texas Medical Association's House of Delegates adopted a recommendation Nov 9 that the fiscal intermediary of a government health program should not overturn a hospital utilization review committee decision without an onsite evaluation. The delegates further contended that only that part of the hospital record relating to the point at issue should be copied and sent to the fiscal intermediary or the government agency.

The recommendation included a model letter explaining termination of benefits to the patient. This letter which has been sent to chiefs-of-staff in Texas hospitals follows:

Dear Patient:

This is a notice of termination of (Medicare or Medicaid) benefits. This action is not the fault of your doctor or this hospital. The federal government regulations require termination of payment according to predeter-

mined criteria of medical necessity.

If the utilization review committee of this hospital does not perform this directed act, the hospital is subject to severe financial penalties from the federal government through their agent (specify the designated fiscal intermediary). This means that, effective (date), you will be held responsible for the cost of further hospitalization during this episode of illness.

Any concern you have about this denial of benefits from the government program under which you are covered should be directed to: Secretary, Department of Health, Education and Welfare, Washington, D C, and your congressman.

Sincerely yours,
(U/R Chairman)

Health planning division to implement federal law

Among other things, the Texas Health Planning and Development Act, passed by the 64th Texas Legislature to implement the federal health planning law, created the Division of Health Planning and Resource Development, under a bureau of the same designation. Each is responsible to the Texas Department of Health Resources.

The Division of Health Planning and Resource Development is headed by Stanley R. Stout, director. Functions of the division include health planning, development and implementation, studies, health policy involvement, project review, areawide development and assistance, program management, public information and education, planning coordination, and data base maintenance.

Current emphasis is focused on development and assistance to the 12 areas of the state which are developing health systems agencies to deal with their respective health planning problems. The division is working with each of these area agencies in an effort to achieve federal approval of these as HSAs. Further assistance will be provided in helping the HSAs prepare a health systems plan and an annual implementation plan.

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Action to block rollbacks urged by subcommittee staff

Quick action has been urged by the House Health Subcommittee staff to block rollbacks in Medicare reimbursement rates for physicians during the current fiscal year.

Charging that the Department of Health, Education and Welfare's index for calculating reimbursement has had the "unintended and unanticipated effect" of pushing some current payment levels below those of last year, the staff said in a report that Congress will have to move quickly "in order to make it as administratively feasible as possible to modify the current situation."

The subcommittee is headed by Rep. Dan Rostenkowski (D-Ill).

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST
(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1975 Through 11/30/75	3 Years Ended 12/31/74	5 Years Ended 12/31/74	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+22.0%	−35.1%	−26.6%	1.6%
Loomis-Sayles Mutual Fund	+21.5%	−29.7%	−21.1%	3.7%
Mercantile Bank Equity Fund	+33.2%	−46.9%	−36.1%	3.8%
Mercantile Bank Fixed Income Fund	+ 1.9%	−17.2%	− 8.5%	8.2%
T Rowe Price Growth Stock Fund	+37.6%	−43.3%	−33.5%	2.0%
T Rowe Price New Income Fund	+ 0.3%	N/A	N/A	8.0%
Stein Roe & Farnham Balanced Fund	+24.1%	−29.6%	−20.8%	3.3%
Standard & Poor 500 Stock Average	+33.1%	−32.8%	−25.5%	
Dow Jones Industrial Average	+39.7%	−30.7%	−22.9%	

*Includes reinvested capital gains distributions.

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thiazide and reserpine

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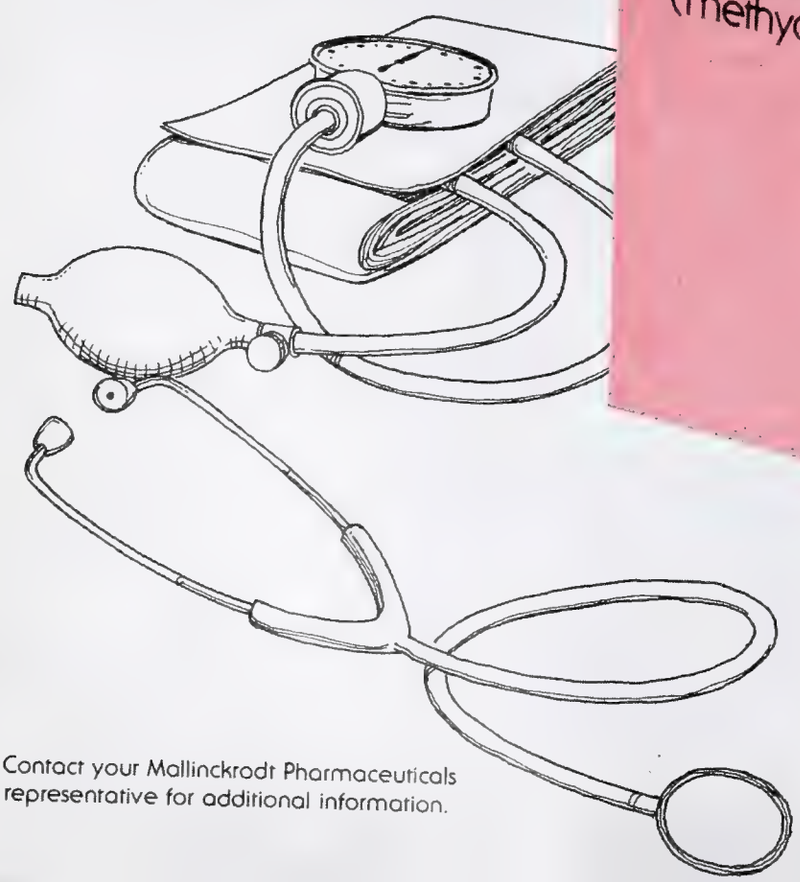
thiazide



*As tannate salts, equivalent
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CAPITAL COMMENTS

WASHINGTON: PSRO HELD CONSTITUTIONAL. On Nov 18 the U S Supreme Court summarily upheld the constitutionality of a federal law establishing professional standards review organizations. The Court upheld a lower federal court ruling that rejected challenges to the law filed by the Association of American Physicians and Surgeons.

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: TMA SUIT CHALLENGES PSRO DESIGNATIONS. Judge Jack Roberts of the U S District Court for the Western District of Texas heard three days of testimony in the suit filed by certain physicians and the Texas Medical Association against the Department of Health, Education and Welfare contesting the rules and regulations relating to PSRO area designations Nov 18, 19, and 20. At this time the judge took the case under advisement. A complete report on the PSRO situation in Texas will be carried in the journal.

AUSTIN: WHITE HOUSE FORUM. Federal health policy was part of the discussion at a White House Public Forum on Domestic Policy held in Austin Nov 11. The forum was one of a series of six regional meetings conducted in cities across the country by Vice President Nelson Rockefeller and cabinet officials. The forum focused on four broad areas of domestic policy: economic growth, resource development, social policy, and community building. Testifying in relation to health care matters were Drs. Milton Davis of Dallas and Mario Ramirez of Rio Grande City. At the morning session chaired by the vice president, Dr. Davis presented a statement which pointed out the impact of certain federal laws and programs upon the delivery of health care as seen by a private practitioner. Dr. Ramirez testified on health costs and delivery in a session chaired by HEW Secretary David Mathews. (See related news article, p 13.)

WASHINGTON: AMA LEGISLATIVE STANDS. The American Medical Association's Council on Legislation and the AMA Board of Trustees recently took policy positions with respect to:

- opposing HR 15, S 774, and S 815 which would repeal the present lobbying law and would increase the government's regulation of lobbying, identification, and disclosure;
- supporting S 2026 which would assist states to provide for people under 21 who are eligible for the early and periodic screening, diagnosis, and treatment benefits under Medicaid;
- opposing S 1504 which would include Part A, Medicare, the coverage of outpatient drugs listed in the formulary to be established by HEW;
- opposing provision of S 1357, the Health Manpower Shortage Area Assistance Act, which would require mandated service as the condition of medical school

admission and a condition to receive a capitation funding (other aspects of the bill are covered by existing AMA policy);

- supporting HR 8212, which would extend the federal grant and contract programs for emergency medical service system;
- opposing HR 6699 and S 1504 which would provide for the establishment of fee schedules under Medicare and Medicaid;
- supporting HR 1690, which would increase the allowable income tax deductions for corporate donations of medical supplies to charitable organizations caring for the ill, the needy, and infants;
- opposing S 2018, which would establish a federal workers' compensation system, on the basis that the states are improving their programs and that workmen's compensation should remain a state responsibility;
- supporting the extension of present Communicable Diseases Act and the venereal disease provisions of HR 8278, but opposing provisions in HR 8278 which would establish a national institute for health information which would require that prescription packages be labeled with all of the names of the drug, its purposes and contraindications. The board reiterated its support of legislation drafted by the AMA proposing labeling requirements.

ALBANY: ARBITRATION FAVORED BY BAR AS AN ALTERNATIVE. While rejecting arbitration as a panacea, a committee of the Bar Association of the City of New York has expressed approval of continued use of the method as an alternative to courtroom litigation. The comment on the arbitration plan appeared in a comprehensive report on current malpractice insurance crisis issued by Cyrus R. Vance, president of the New York association.

WASHINGTON: AHA STATES BILL WOULD INCREASE HOSPITAL CHARGES. Increasing the federal minimum wage and over-time compensation would inevitably force increases in hospitals' charges to patients if quality services are to be maintained, according to a statement by the American Hospital Association to the Labor Standard Subcommittee of the House Committee on Education and Labor. The AHA's comments concern HR 10130, a bill introduced by subcommittee chairman, Rep John Dent (D-Pa). The bill would increase the federal minimum wage by increments to $3 per hour by Jan 1,1978. Thereafter, the minimum wage would be tied to the consumer price index. The bill would also increase the rate for over-time from 1.5 to 2.5 times an employee's hourly rate.

WASHINGTON: PHYSICIAN FEE SCHEDULE PROPOSAL. A bill that would establish physicians' fee schedules under Medicare and Medicaid has been opposed by the American Medical Association. Under the bill, HR 6699, physicians participating in fee schedule programs to be set up by state governors would be required to accept scheduled amounts as full payment, and their payment would not be subject to the usual deductible and co-insurance. Physicians who did not participate would be paid on the basis of present reimbursement programs, subject to deductible and co-payment.

LOS ANGELES: DOCTOR SUES MEDICAL ASSOCIATION. The Los Angeles County

Medical Association is being sued over professional liability insurance rates by a physician who practices in Ventura and Los Angeles counties. The suit reportedly claims that Hartford and Phoenix insurance companies and the medical association have conspired to restrain fair trade and monopolize the medical "malpractice" insurance field. Filed in Los Angeles Superior Court, the suit seeks $120 million in alleged damages and asked the court to declare that the agreements between LACMA and the insurance companies constitute unfair business practices and monopolistic restraint of fair trade, making them void and unenforceable.

ORANGE COUNTY, CALIF: INSURANCE COMPANY FILES SUIT AGAINST MEDICAL ASSOCIATION. A $900 million suit has been filed against Orange County (Calif) Medical Association by American Benefits, Inc., a medical management agency in Orange that offers "malpractice" arbitration programs. The lawsuit alleges that the medical association conspired to interfere with trade and to create a monopoly. The suit also charges OCMA with libel for publicizing in its newsletter, a warning by the state insurance commissioner to use caution in dealing with unfamiliar organizations that offer malpractice insurance, suggesting that physicians verify the company's authenticity through the commissioner's office.

WASHINGTON: MEDICARE PROCESSING COSTS. According to the General Accounting Office, it costs $12.39 to process a single Medicare bill through the Social Security Administration's Division of Direct Reimbursement. The average cost of processing the same sort of bill is $7.31 by the Travelers Insurance Group; $7.28 by Mutual of Omaha; $3.81 by Chicago Blue Cross; and $3.55 by Maryland Blue Cross.

WASHINGTON: DRUG SUIT FILED. Another federal suit against HEW's Maximum Allowable Costs Drug Reimbursement Program was filed Oct 20 by the Pharmaceutical Manufacturers Association. The suit, filed in the U S District Court for the District of Columbia, contends that the HEW plan will adversely affect the quality of patient care and will "require federal officials and employees to exercise supervision and control over the practice of medicine." The regulations, published in the *Federal Register* last July, were challenged by the American Medical Association's suit filed July 29 seeking a permanent injunction barring enforcement of the regulations. Action on the case is pending HEW's filing of a reply brief to the challenge, which is expected soon.

WASHINGTON: HEW RELEASES SOME MEDICAID EARNINGS. Twenty-eight Texas physicians were included in a list of 215 doctors in 19 states and the District of Columbia who received $100,000 or more in Medicaid payments in 1974. The names of the Texas doctors have been carried by at least one major Texas newspaper. One Texas doctor listed, HEW has acknowledged, was inaccurately reported. The identity of the physicians was released by the department under the requirements of the Freedom of Information Act after it was requested by several newspapers. In a statement released with the names, HEW officials stressed that the fact that these physicians had received such amounts from Medicaid should not be construed as any evidence of wrongdoing.

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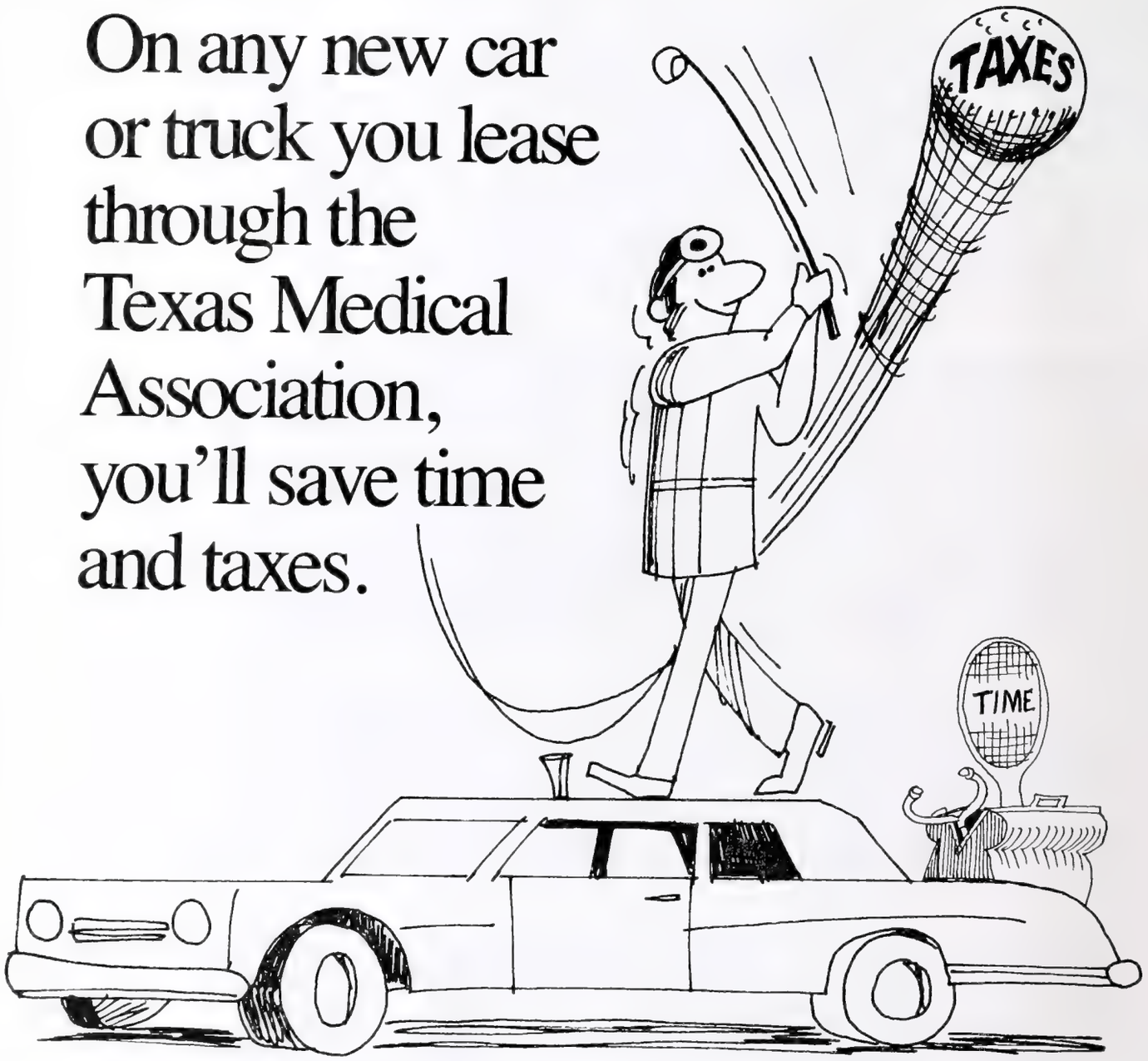

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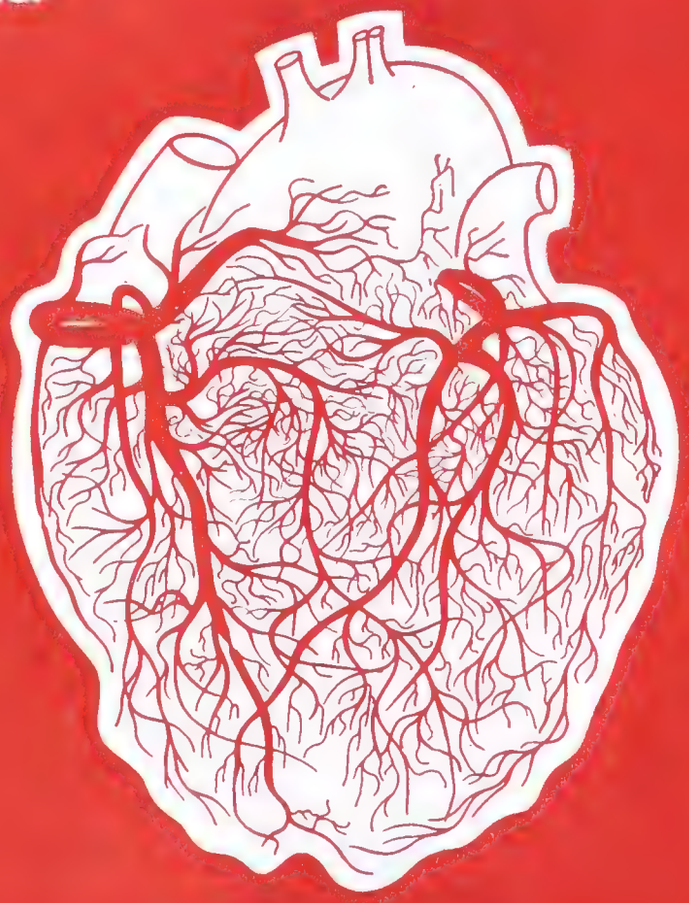

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- **To provide prophylaxis against anginal attacks often caused by unavoidable everyday stress.**
- **To reduce the frequency and severity of angina pectoris attacks. (Not intended to abort the acute episode.)**

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Possibly" effective: When taken by the oral route, Isordil is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.
Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.
Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

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COMING MEETINGS

TEXAS MEDICAL ASSOCIATION

Texas Medical Association's 1976 Conference on Legislation and Medical Service will be held Jan 16-18, 1976, at the Joe C Thompson Conference Center in Austin. The Conference will open at 9 am, and close at 4:30 pm. Registrants will be guests of the Association for lunch, and the Texas Employers Insurance Association will host a cocktail party at the conclusion of the conference. The keynote speaker will be Richard L Lesher, PhD, Washington, DC, President, Chamber of Commerce of the United States.
(For further details, see story on p. 6.)

Contact: C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701

PSYCHIATRIC AUDIT TEAM SEMINAR

The Texas Medical Foundation has announced the scheduling of a Psychiatric Audit Team Seminar (PATS) for Jan 13-14, 1976, in Dallas. The PATS will be conducted by the Joint Commission on Accreditation of Hospitals. The program seeks to provide health care facilities with the mechanism for measuring and documenting the quality of care they are delivering.

Contact: Texas Medical Foundation, 7800 Shoal Creek, Suite 390W, Austin 78757

TEXAS SOCIETY OF PATHOLOGISTS, INC

The annual meeting of the Texas Society of Pathologists, Inc, will be held at the Hilton Inn, Fort Worth, beginning at 8:30 am, Jan 24, 1976. Topics of discussion include recent advances in thyroid function tests, current thoughts on clindamycin cloitis, perspective on coronary artery bypass surgery, blood gases—clinical implications, pathology around the world, spectrum of renal cystic diseases, and perspective of current blood banking practices.

Contact: Ms. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701

CURRENT MEETINGS IN TEXAS

EMERGENCY MEDICAL SERVICES SYMPOSIUM, Hilton Inn, Austin, Jan 28-29, 1976. Coordinated by Tex Dept of Health Resources, Emergency Medical Services Division. Emphasis on emergency medical care as a comprehensive system. Registration fee, $15. Registration held from 7:30 am through 9:15 am on Jan 28. Speakers include Charles E King, Drs. Fratis L Duff, Floyd A Norman, Robert E Streicher, David R Boyd. Contact: Tex Dept of Health Resources, Emergency Medical Services Division, Box 14986, Austin 78761.

CURRENT NATIONAL MEETINGS

72nd ANNUAL CONGRESS ON MEDICAL EDUCATION, Palmer House, Chicago, Jan 30-Feb 1, 1976. Presented by Council on Medical Education of American Medical Association in collaboration with Association for Hospital Medical Education, American Medical Student Association, American Society of Allied Health Professions, Federation of State Medical Boards of the United States, Intern and Resident Business Session (AMA). Sessions open to all Congress participants except business meetings of organizations and those as specified in program. Registration fees: $5. students; $25, others. Contact: AMA, 535 N Dearborn St, Chicago 60610.

TEXAS ACADEMY OF FAMILY PHYSICIANS, Aspen Colo, Jan 24-31, 1976. Guest speakers are Dr. Ronald Mahoney, Clinical Assoc Prof, UT at Houston, Director Cardiopulmonary Dept, and Director Maximal Stress Lab and Cardiac Cath Lab; Dr. Donald G Pansegraw, Director Maximal Stress Lab and Cardiac Rehabilitation Service, St. Paul's Hospital, Dallas. Topics, cardiology and pulmonary problems. Fee for scientific program, $75. Acceptable for 25 hours prescribed credit, AAFP. Contact: Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

For other courses and symposiums, see Continuing Education Courses, pp 122-125.

Calendar of Listings

■ Denotes Texas Meetings

JANUARY

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, New Orleans, Jan 30-Feb 4, 1976. Dr. CV Heck, 430 N Michigan Ave, Chicago 60611.

AMERICAN COLLEGE OF PHYSICIANS, COLORADO REGIONAL MEETING, Colorado Springs, Colo, Jan 15-17, 1976. Dr. Robert V Elliott, St. Luke's Hospital, 601 E 19th Ave, Denver 80203.

AMERICAN COLLEGE OF PSYCHIATRISTS, Coronado, Calif, Jan 28-Feb 1, 1976. Dr. JC Nemiah, Sec-Gen, 330 Brookline Ave, Boston 02215.

■ AMERICAN COLLEGE OF SURGEONS, SOUTH TEXAS CHAPTER, Brownsville, Jan 29-31, 1976. Dr. Edwin M Sykes, Jr, Sec, 428 Baltimore, San Antonio 78215.

AMERICAN ORTHOPAEDIC FOOT SOCIETY, New Orleans, Jan 30, 1976. Dr. RA Mann, Sec, 5495 Fernhoff Rd, Oakland, Calif 94619.

AMERICAN SOCIETY FOR SURGERY OF THE HAND, New Orleans, Jan 28-30, 1976. Dr. JA Boswick, Jr, Sec-Treas, 4200 E 9th St, Box 2414, Denver 80220.

■ EMERGENCY MEDICAL SERVICES SYMPOSIUM, Austin, Jan 28-29, 1976. Tex Dept of Health Resources, Emergency Medical Services Division, Box 14986, Austin 78761.

EPILEPSY FOUNDATION OF AMERICA, Washington, DC, Jan 19-22, 1976. 1828 L St, NW, Washington, DC 20036.

INTER-AMERICAN SYMPOSIUM ON INTERNAL MEDICINE, Mexico City, Jan 12-15, 1976. Dr. James F Hammarsten, The University of Okla Health Sciences Center, College of Medicine, Dept of Medicine, Box 26901, Oklahoma City 73190.

SOCIETY OF THORACIC SURGEONS, Washington, DC, Jan 26-28, 1976. WG Purcell, Bus Mng, 111 E Wacker Dr, Chicago 60601.

SOUTHERN SOCIETY FOR PEDIATRIC RESEARCH, New Orleans, Jan 23-24, 1976. Dr. JR Montgomery, Sec-Treas, 1200 Moursund Ave, Houston 77025.

TEXAS ACADEMY OF FAMILY PHYSICIANS, Snowmass, Colo, Jan 24-31, 1976. Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

■ TEXAS MEDICAL ASSOCIATION, Austin, Jan 16-18, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS SOCIETY OF PATHOLOGISTS, Fort Worth, Jan 23-25, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

US VIRGIN ISLANDS MEDICAL SOCIETY, St. Thomas, VI, Jan 29-31, 1976. Dr. Harold A Hanno, Sec, Box 1442, St. Thomas, VI 00801.

FEBRUARY

AMERICAN COLLEGE OF CARDIOLOGY, New Orleans, February, 1976. William D Nelligan, Exec Off, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION, Boston, Feb 3-7, 1976. Ms. M Block, Admn Sec, 1865 Broadway, 12th Floor, New York 10023.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Bal Harbour, Fla, Feb 29-Mar 5, 1976. Dr. John G Bellows, Dir, 30 N Michigan Ave, Chicago 60602.

■ DISTRICT I MEDICAL SOCIETY OF THE TEXAS MEDICAL ASSOCIATION, El Paso, Feb 7, 1976. Dr. Laurance N Nickey, Sec-Treas, 1515 N Oregon, El Paso 79902.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, San Antonio, Feb 26-27, 1976. SE Cockrell, Jr, Exec Off, 202 W French Place, San Antonio 78212.

NOAH WORCESTER DERMATOLOGICAL SOCIETY, Hollywood, Fla, Feb 28-Mar 6, 1976. Dr. H Plotnick, Sec-Treas, 1150 David Whitney Bldg, Detroit 48226.

SOCIETY FOR CONTEMPORARY OPHTHALMOLOGY, Miami Beach, Fla, Feb 29-Mar 5, 1976. Dr. John Bellows, Exec Off, 30 N Michigan Ave, Chicago 60602.

■ SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Houston, Feb 18-20, 1976. Mrs. Floy Bleker, Exec Sec, 4300 N Lamar Blvd, Austin 78756.

SOUTHEASTERN SURGICAL CONGRESS, New Orleans, Feb. 8-12, 1976. Dr. AH Letton, Sec-Dir, 315 Boulevard NE, Suite 500, Atlanta 30312.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Fort Worth, Feb 29-Mar 3, 1976. Robert E Monroe, Exec Sec-Treas, 1117 W 42nd, Austin 78756.

MARCH

ALPHA EPSILON DELTA, Tuscaloosa, Ala, Mar 31-Apr 3, 1976. 7 Brookside Circle, Bronxville, NY 10708.

AMERICAN ACADEMY OF ALLERGY, San Juan, PR, Mar 6-10, 1976. JO Kelley, Exec Off, 225 E Michigan St, Milwaukee 53202.

AMERICAN ASSOCIATION OF PATHOLOGISTS & BACTERIOLOGISTS, Boston, Mar 20-23, 1976. 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN DIOPTER & DECIBEL SOCIETY, San Diego, Calif, Mar 14-21, 1976. Dr. Albert C Esposito, Exec Dir, Suite 100, Medical Center Bldg, 420-422 11th St, Huntington, WVa 25701.

AMERICAN MEDICAL STUDENT ASSOCIATION, New Orleans, Mar 5-7, 1976. Louis R Giancola, Exec Dir, 1400 Hicks Rd, Rolling Meadows, Ill 60008.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Seattle, Mar 18-19, 1976. 1718 Gallagher Rd, Norristown, Pa 19410.

ASPEN RADIOLOGY CONFERENCE, Aspen, Colo, Mar 1-5, 1976. Registration Division, 1818 Gaylord St, Denver 80206.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, Atlanta, Mar 21-25, 1976. 1901 N Ft Myer Dr, Suite 602, Arlington, Va 22209.

INTERNATIONAL ACADEMY OF PROCTOLOGY, India, Mar 17-Apr 4, 1976. Exec Offices, 147-41 Sanford Ave, Flushing, NY 11355.

NEVADA TUMOR REGISTRY OF THE NEVADA CANCER CONTROL INSTITUTE, Las Vegas, Nev, Mar 11-12, 1976. Ms. Irene S Peacock, 1800 W Charleston Blvd, Las Vegas, Nev 89102.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 29-Apr 1, 1976. 1430 Tulane Ave, New Orleans, La 70112.

■ TEXAS ASSOCIATION OF OBSTETRICIANS & GYNECOLOGISTS, McAllen, Mar 11-13, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS RADIOLOGICAL SOCIETY, Houston, Mar 4-6, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

APRIL

AMERICAN ACADEMY OF NEUROLOGY, Toronto, Apr 26-May 1, 1976. Stanley A Nelson, Exec Off, 4015 W 65th St, Suite 302A, Minneapolis 55435.

AMERICAN ACADEMY OF PEDIATRICS, Philadelphia, Apr 12-15, 1976. Dr. Robert G Frazier, 1801 Hinman Ave, Evanston, Ill 60204.

AMERICAN ASSOCIATION OF ANATOMISTS, Louisville, Apr 20-23, 1976. Dr. John C Finerty, Pres, LSU Medical Center, Suite 1510, Canal LaSalle Bldg, New Orleans 70112.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Los Angeles, Apr 23-25, 1976. William T Maloney, Exec Off, 6 Beacon St, Boston 02108.

AMERICAN COLLEGE OF ALLERGISTS, Las Vegas, Nev, Apr 4-8, 1976. Eloi Bauers, JD, Exec Vice-pres/ Counsel, 2100 Dain Tower, Minneapolis 55402.

AMERICAN COLLEGE HEALTH ASSOCIATION, Denver, Apr 27-30, 1976. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

AMERICAN COLLEGE OF PHYSICIANS, Philadelphia, Apr 5-8, 1976, Dr. Edward C Rosenow, Jr, 4200 Pine St, Philadelphia 19104.

■ AMERICAN GERIATRICS SOCIETY, INC, Houston, Apr 21-22, 1976. 10 Columbus Circle, New York 10019.

DIGESTIVE DISEASE WEEK, Miami Beach, Fla, Apr 22-27, 1976. Fred Kern, Jr, Pres, 4200 E 9th Ave, Denver 80220.

AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION, Palm Beach, Fla, Apr 27-28, 1976. Dr. LW Pratt, Sec, 37 Lawrence Ave, Fairfield, Me 04937.

AMERICAN FERTILITY SOCIETY, Las Vegas, Nev, Apr 5-8, 1976. Dr. JC Weed, Med Dir, 1608 13th Ave S, Suite 101, Birmingham, Ala 35205.

AMERICAN MEDICAL ELECTROENCEPHALOGRAPHIC ASSOCIATION, Savannah, Ga, Apr 7-11, 1976. Dr. WA Stephenson, Sansum Medical Clinic, Inc, PO Drawer LL, Santa Barbara, Calif 93102.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Cincinnati, Apr 24-29, 1976. HN Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN OTOLOGICAL SOCIETY, Palm Beach, Fla, Apr 25-26, 1976. Dr. GD Taylor, Sec-Treas, 221 Marshall Taylor Dr Bldg, Jacksonville, Fla 32207.

AMERICAN SOCIETY FOR ARTIFICIAL INTERNAL ORGANS, San Francisco, Apr 1-3, 1976. Mrs. KK Burke, Exec Dir, ASAIO National Office, Box 777, Boca Raton, Fla 33432.

AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY, Anaheim, Calif, Apr 11-16, 1976. Dr. GB Mider, Exec Off, 9650 Rockville Pike, Bethesda, Md 20014.

ASSOCIATION FOR THE ADVANCEMENT OF PSYCHOANALYSIS, New York, Apr 13, 1976. Dr. M Rendon, Sec, 333 E 30 St, New York 10016.

ASSOCIATION OF CONVALESCENT HOMES AND HOSPITALS FOR ASTHMATIC CHILDREN, Las Vegas, Nev, Apr 1-2, 1976. I Friedman, Exec Vice-pres, Spring Valley Rd, Ossining, NY 10562.

NATIONAL COUNCIL ON ALCOHOLISM, Washington, DC, Apr 9-10, 1976. Suite 1720, 2 Park Ave, New York 10016.

MAY

■ AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, Dallas, May 10-13, 1976. Dr. Warren H Pearse, Exec Off, 1 E Wacker Dr, Suite 2700, Chicago 60601.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, Dallas, May 15, 1976. Dr. RC Jones, Sec, 5323 Harry Hines, Dallas 75235.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, McAllen, May 20-23, 1976. Geraldine Midgley, Exec Off, Box 1287, Uvalde 78801.

■ SOUTHWEST ALLERGY FORUM, San Antonio, May 22-25, 1976. Dr. Peter B Kamin, 601 Oak Hills Medical Bldg, San Antonio 78229.

■ SOUTHWESTERN SURGICAL CONGRESS, Houston, May 3-6, 1976. Dr. Jack A Barney, Sec-Treas, 708 Physicians & Surgeons Bldg, Oklahoma City 73103.

■ **TEXAS MEDICAL ASSOCIATION, Annual Session, Dallas, May 6-9, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.**

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Dallas, May 7, 1976. Dr. Frank J Kelly, Sec-Treas, Box 647, Amarillo 79177.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, Dallas, May 7-8, 1976. Dr. Jeff R Moore, Box 3755, Amarillo 79106.

JUNE

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Las Vegas, Nev, Jun 13-16, 1976. Dr. Richard H Moiel, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77025.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Dallas, June, 1976. Dr. CB Shuey, Jr, Sec, 3500 Gaston Ave, Dallas 75246.

■ AMERICAN HEART ASSOCIATION, TEXAS CHAPTER, Houston, Jun 9-13, 1976. Box 9928, Austin 78766.

AMERICAN SOCIETY OF LAW AND MEDICINE, Boston, Jun 21-23, 1976. Dr. Elliot L Sagall, 454 Brookline Ave, Boston 02215.

■ AMERICAN MEDICAL ASSOCIATION, Dallas, Jun 27-Jul 1, 1976. 535 N Dearborn, Chicago 60610.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Houston, Jun 15-17, 1976. Dr. A Bryan Spires, Southwest Tower Bldg, Suite 900, 211 E 7th St, Austin 78701.

Plan to attend the

Texas Medical Association

CONFERENCE ON LEGISLATION AND MEDICAL SERVICE

Saturday, January 17, 1976 — Austin

FEATURED SPEAKERS:

"Can Capitalism Survive?"
RICHARD L. LESHER, PhD, Washington, DC
President, US Chamber of Commerce

"1976—A Year of Legislative Decision for Medical Manpower and Education"
TOM E. NESBITT, MD, Nashville
Speaker, AMA House of Delegates

"Issues Before Congress and the Ways and Means Committee"
HON. J. J. "JAKE" PICKLE, Austin
Representative, 10th Congressional District of Texas; Member, US House of Representative Ways and Means Committee

"Is This the Year for National Health Insurance?"
EDGAR T. BEDDINGFIELD, MD, Wilson, NC
Chairman, AMA Council on Legislation

PANEL SESSIONS:

Update on Professional Standards Review Organizations/TMA's Role in Resolving the Professional Liability Insurance Crisis/Achieving Maximum Effectiveness on Issues Before Congress and the Texas Legislature/ TMA's Multi-Faceted Approach to Representing Physicians on Issues Which Impose Economic Restraints Upon Them

PLUS: CURBSTONE CONSULTATIONS AND ORIENTATION PROGRAM

PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

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WORMS BLITZED

A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

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Sputum cytopathological findings in former asbestos workers

S. Donald Greenberg, MD; George A. Hurst, MD; William T. Matlage, MD; Charles S. Christianson, MD; Irby J. Hurst, MD; Linda C. Mabry, CT

Cigarette smoking asbestos workers constitute a high-risk group for the potential development of lung cancer. The Tyler Asbestos Workers Program was begun in July 1974 to examine 890 former asbestos workers, approximately 90% of whom are cigarette smokers. As of April 1975, 456 former workers had been studied by sputum cytopathology; 217 (48%) were found to have mild squamous epithelial atypias, 20 (4%) severe atypias, and 1 (0.3%) malignant cells of a squamous carcinoma. Sputum cytopathology has been found to be an excellent, simple, noninvasive, painless, and inexpensive means of early detection of premalignant and malignant lesions of the lungs.

One-third (33%) of these former asbestos workers had ferruginous bodies in their sputum. The ferruginous bodies were most numerous in aerosol-induced sputa specimens and could be readily identified by the routine Papanicolaou stain.

Introduction

The Tyler Asbestos Workers Program has been developed for former asbestos workers in order to provide them the most up-to-date care for the early detection and treatment of pulmonary diseases, particularly carcinoma. Approximately 90% of these men are also cigarette smokers, and this along with their previous occupational asbestos exposure renders them 90 times more likely than the general population to develop carcinoma of the lung.[1,2] The cohort for the program is composed of 890 former amosite asbestos workers, most of whom still live within a 150-mile radius of Tyler, Texas. The plant operated between 1954 and 1972. The program began in July 1974, and is ongoing. Each former worker is scheduled for a complete interview, physical examination, and laboratory diagnostic studies including complete blood count and urinalysis, roentgenogram of the chest, electrocardiogram, spirometry, and sputum cytopathology which serves as the heart of the program. Through April 1975, 1,184 sputum specimens from 456 workers had been studied and the results serve as the basis of this report.

Material and Methods

Sputum is collected by both aerosol inhalation during the initial clinic visit and early morning cough at home. All sputa are collected directly into 60% alcohol which serves as an instant fixative. Three sequential early morning home-collected sputa are mailed to the cytopathology laboratory and pooled into one. Sputum induction is carried out by transoral inhalation of a few breaths of an ultrasonic aerosol mist of 8% solution of sodium chloride in water. After inhaling as few as three to five breaths, the patient yields an adequate specimen which is collected directly into 60% alcohol in the sputum container. The sputum specimens are poured into a Petri dish and the cytotechnologist, using curettes, selects out portions of cellular aggregates, debris, and particulate matter and transfers them onto four prelabeled microscopic slides which have been coated with a thin layer of albumin. The cellular material is spread thinly and evenly over the slide by a second slide which is not albumin coated. The

From the Department of Pathology, Baylor College of Medicine, and the East Texas Chest Hospital, Tyler, Texas.

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slides to be stained are then placed in 95% ethyl alcohol in a Coplin jar and subsequently stained in the routine manner by the Papanicolaou technique. The remainder of the specimen is utilized for preparation of a cell block. The sediment for the cell block is placed into a tissue embedding bag, passed through the routine tissue fixatives, and embedded in paraffin. The paraffin blocks of the sediment are sectioned and stained with hematoxylin and eosin and Prussian blue for iron.

Screening of the Papanicolaou-stained sputum smears averages five to seven minutes per slide. Black ink dots are placed by atypical cells and green ink dots by ferruginous bodies. The total number of ferruginous bodies per specimen (four slides) is reported as follows: few, 1 to 14; moderate, 15 to 29; and many, more than 30. For quality control, the cytopathology slides of 10% of all negative sputa specimens are rescreened.

The sputa specimens are reported as unsatisfactory (saliva), no atypia, mild atypia, severe atypia, and positive for carcinoma. Free alveolar macrophages must be identified in order for the specimen to be considered adequate; otherwise it is presumed to be unsatisfactory. Mild atypias include squamous metaplasia and mild dysplasias. Severe atypias include moderate and severe dysplasias. The term "dysplasia" is used to imply dyskaryosis. The squamous metaplasia and the dysplasias are thought to be reversible atypias of the bronchial epithelium. "Positive for carcinoma" includes both carcinoma in situ and invasive carcinoma. We are applying this nomenclature of descriptive terminology to represent the progression of epithelial atypias from the mildest change of simple squamous metaplasia to the development of frank squamous carcinoma.

Results

Ferruginous bodies have been found in the sputa of approximately one-third of the former asbestos workers. Less than

1. Photomicrograph of sputum showing a dumbbell-shaped ferruginous body. Note the adjacent cluster of free alveolar macrophages. Papanicolaou stain, X 260.

2. Photomicrograph of sputum showing a lance-shaped ferruginous body. Papanicolaou stain, X 260.

1% of those tested have failed to produce satisfactory specimens. Thus far, only one former worker has been found to have cells positive for squamous carcinoma in his sputa. He was a 76-year-old Caucasian man who had worked in the asbestos plant from 1954 to 1961. He was also a chronic cigarette smoker of 180 pack years.* Initial sputum examination disclosed both ferruginous bodies (Figs 1, 2) and malignant cells of squamous carcinoma (Fig 3). A roentgenogram of the chest showed reticular infiltrates consistent with interstitial fibrosis in the lower lobes of both lungs; however, no localizing lesion was seen. Fiberoptic bronchoscopy revealed an ulcerating lesion of the bronchus intermedius which, by brushing, washing, and biopsy, was positive for squamous carcinoma (Fig 4). Mediastinoscopy and other routine laboratory studies showed no metastasis, and a right exploratory thoracotomy was performed. When visceral pleural metastases were discovered, the carcinoma was considered to be unresectable and the operation was terminated. The patient refused both radiation therapy and chemotherapy, and died of probable ventricular fibrillation six months after diagnosis. Necropsy revealed the squamous cell carcinoma of the bronchus intermedius (Fig 5) with metastases to right bronchial lymph nodes, right visceral pleura, and pericardium. Asbestosis with interstitial fibrosis was present in both lower lobes of the lungs (Figs 6, 7) and centrilobular emphysema was present in the upper lobes.

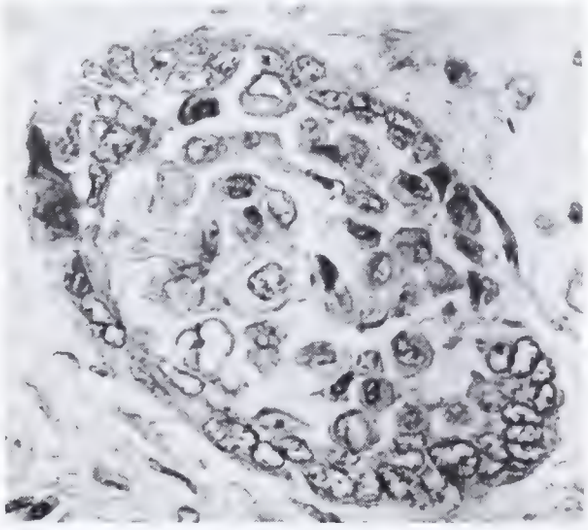
Twenty former workers (4%) have had sputa with severe epithelial atypias, and 48% have had mild atypias, the majority of which are squamous metaplasia.

In the group of former workers whose sputa has yielded ferruginous bodies, the aerosol method of sputum specimen induction has provided for more frequent recovery of the bodies than spontaneous sputa alone. Also, by our methods of quantitation, the aerosol-induced sputa specimens contain a larger number of

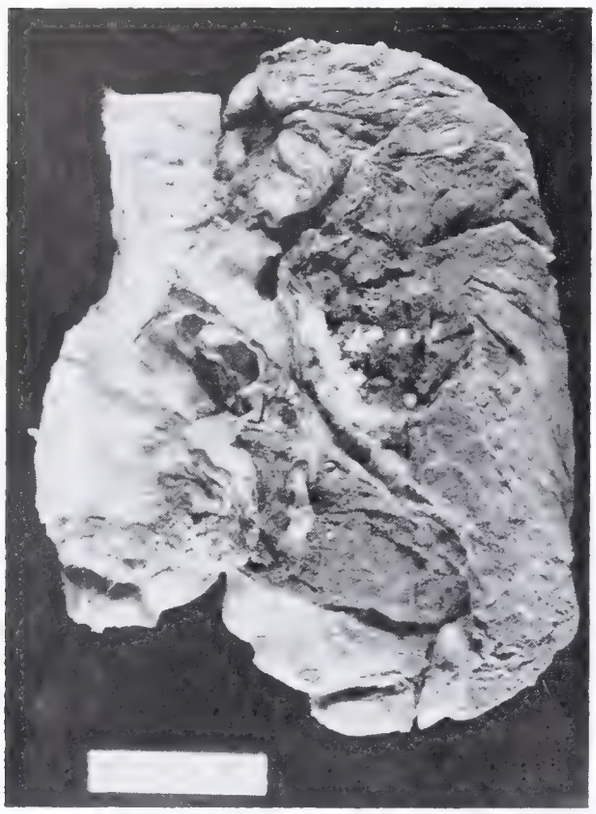
*Three packs of cigarettes/day/50 years.

3. Photomicrograph of sputum revealing two large malignant cells of squamous carcinoma. Papanicolaou stain, X 260.

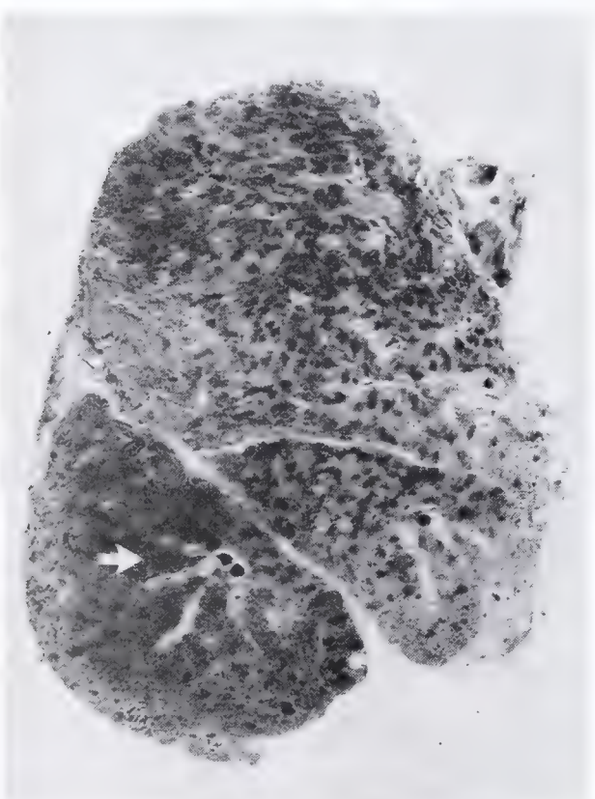
4. Photomicrograph of the tissue preparation of the bronchial biopsy. Note nest of malignant cells of squamous carcinoma. Hematoxylin and eosin stain, X 145.



5. Gross photograph of a coronal section of the right lung. Note the irregular white squamous carcinoma (arrow) involving the bronchus intermedius.



6. Gross photograph of coronal section of right lung. There is diffuse interstitial fibrosis of the lower lobe (arrow).



ferruginous bodies. This appears to be even more significant when one considers that the aerosol-induced specimen is a single specimen, while the spontaneous specimen is a pool of three. The sputa specimens with severe epithelial atypias were equally distributed between aerosol-induced and spontaneous specimens.

Discussion

While the first cases of pulmonary fibrosis caused by asbestos inhalation were reported in 1929,[3] and the first case of lung cancer associated with asbestos in 1935,[4] it was not until 1968[2] that epidemiologic studies established the role of asbestos in the development of lung cancer in cigarette smoking asbestos workers.

The Tyler asbestos plant was in operation between 1954 and 1972, employing 890 men who processed amosite asbestos mined in South Africa.

For many years, sputum cytopathology has been known to be a useful clinical laboratory means of early detection and diagnosis of lung cancer, yielding positive results in up to 80% of cases.[5] Only recently, however, has the role of fiberoptic bronchoscopy been established in the localization of superficial endobronchial carcinomas.[6] Serial roentgenograms of the chest will not permit truly early detection of lung cancer because such a cancer must grow and double for more than five years before it becomes large enough to be seen by the radiologist.[7]

Thus far, in the Tyler Asbestos Workers Program, only one of 456 former workers has had a sputum cytopathologic diagnosis of squamous carcinoma. Although the roentgenogram of this man's chest showed no localizing lesion, the cancer found by fiberoptic bronchoscopy in the bronchus intermedius had already metastasized to the visceral pleura and was nonresectable for cure. Twenty of these 456 former workers have severe atypia of epithelial cells in their sputa. Close clinical and cytologic follow-up of these 20 patients is presently in progress. As the program continues, all 890 former workers will be examined and reexamined

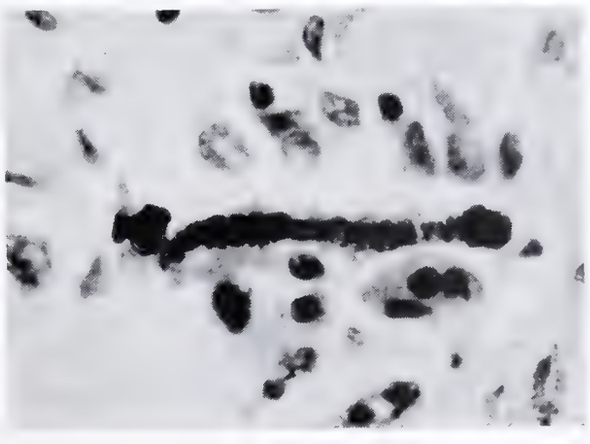
routinely at six-month intervals or more often depending upon cytopathologic and clinical findings in each case.

As yet, no statistical correlations can be made between the association of ferruginous bodies (Fig 8) and atypical epithelial cells in the sputa, but in the future, as more data are gained, this will be of great interest. Even now, one can state that the finding of ferruginous bodies in such numbers indicates significant asbestos exposure, because from 1972 to 1975, not one such body had been found in similar cytopathologic examinations of 12,000 sputa specimens from the general public in the Cytopathology Laboratory of the Harris County Hospital District, Houston, Texas.

Conclusion

Sputum cytopathology is an excellent, simple, noninvasive, painless, and inexpensive means for early detection of malignant and premalignant lesions of the lung, and no special techniques are necessary for the identification of ferruginous bodies.

7. Photomicrograph of tissue preparation from right lower lobe of lung showing a deeply stained ferruginous body with associated free alveolar macrophages and fibroblasts. Prussian blue stain, X 170.



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Dr. Greenberg, Director of Cytopathology, Department of Pathology, Baylor College of Medicine, Texas Medical Center, Houston, Texas 77025.

Drs. G. A. Hurst, Matlage, Christianson, I. J. Hurst, and Ms. Mabry, Tyler Asbestos Workers Program, East Texas Chest Hospital, Box 2003, Tyler, Texas 75701.

8. Artist's sketch of a club-shaped ferruginous body with associated free alveolar macrophages.

Lead health hazards from smelter emissions

The El Paso City County Health Department began an investigation of a large custom smelter in its city in December 1971 in preparation for a court case filed by the city for violations of Texas rules and regulations governing air pollution. The smelter has been in operation since 1887, producing lead, copper, and zinc from over 800,000 metric tons of ore concentrates shipped to this central location. During the investigation, it was determined that the smelter had emitted 1,012 metric tons of lead, as well as 508 metric tons of zinc, 11 metric tons of cadmium, and 1 metric ton of arsenic from its stacks into the surrounding atmosphere from 1969 through 1971.[1-2]

The emission of particulate lead into atmosphere has been of concern not only in El Paso but throughout the United States, where it is estimated that 166,000 metric tons of particulate lead alone is emitted into the atmosphere each year.[3] The principal source of this emission is from the automobile, and this has led to a growing realization that this source may be a widespread and potentially important source of lead absorption among children.[4,5,28,29,31] Chronic ingestion and inhalation of particulate lead from contaminated dust, soil, and air may account in part for the higher mean blood lead levels of urban as compared to rural children,[4] and may account for the increased lead levels seen in children living near busy roadways.[6]

While automobiles may be the major source of lead-bearing particulate matter, stationary sources such as smelters can create environmental concentrations of lead which should be closely watched and monitored. High levels of lead concentrations in the vicinity of stationary sources[7-10] are particularly possible where climatic conditions such as aridity, low wind velocity, and frequent thermal inversions minimize opportunities for pollutant dispersion. Studies of human lead absorption in such areas as described might illustrate further the potential health hazard posed by particulate lead and its role and route of absorption from the environment.

In our studies, first we determined lead concentrations in particulate matter collected with high-volume samplers throughout El Paso from 1969 through 1971. After consulting with appropriate authorities concerning the measured lead levels in the ambient air, we then proceeded to determine blood lead levels in a sample of persons living throughout El Paso. Results of this initial study caused us concern and thus began an extensive study of exposure of these people to lead in dust, soil, paint, food, water, and pottery. Our purpose was to ascertain the prevalence and severity of lead absorption in this locale, and to evaluate the role of particulate lead in lead uptake (Fig 1).

Background

El Paso is located in the extreme western part of Texas alongside the Rio Grande River adjoining Ciudad Juarez,Chihuahua, Mexico. According to the 1970 United States census, it has a population of 322,261.

The topography of the area is mountainous with the City of El Paso separated by the Franklin Mountains and the Juarez Mountains to the south in Mexico. The area is semidesert and arid to the extent that rainfall supports only limited vegetation (10 to 25 cm of rainfall per year).[11] Winds are moderate (annual average 13.5 km per hour)[12] but a fine, gritty dust be-

Bernard F. Rosenblum, MD, MPH
Jimmie M. Shoults, PE
Robert Candelaria, BS

comes airborne particularly during March and April. Thermal inversions occur on 70% of the mornings.[12]

Air Sampling

Airborne concentrations of lead, zinc, cadmium, and arsenic were determined from particulate matter collected with high volume samplers, and the size distributions of the suspended particulate matter collected were determined. In addition, heavy metals concentrations were determined in dust collected from dustfall jars, and ratios of lead to bromine were determined in suspended particulate samples for correlation and identification of lead derived from automobile gasoline sources.

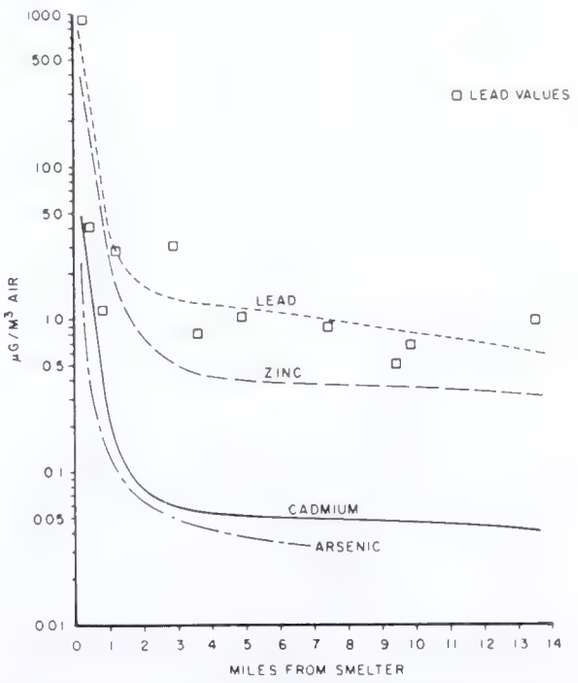
Ambient air samples—property line samples both upwind and downwind—were collected at and around the smelter from 60 to 120 meters from the base of the main smelter stacks and at 39 other locations in El Paso. All collections were made according to methods standardized by the Texas Air Control Board.[53] Determinations of heavy metals concentrations in the samples were made by atomic spectrophotometry and arsenic concentrations by an arsine method.[14]

Property line samples at the smelter in 1971 contained an annual mean lead concentration of 92 $\mu g/m^3$ with ranges from 15 to 269 $\mu g/m^3$. Concentration levels fell rapidly with distance from the smelter and reached normal background levels at distances of 4 to 5 km. Cadmium, zinc, and arsenic levels were also highest near the smelter and decreased with distances from the smelter. From June 1972 through July 1973 lead concentrations were again highest downwind of the smelter with a 12-month mean of 43 $\mu g/m^3$ (Fig 1).

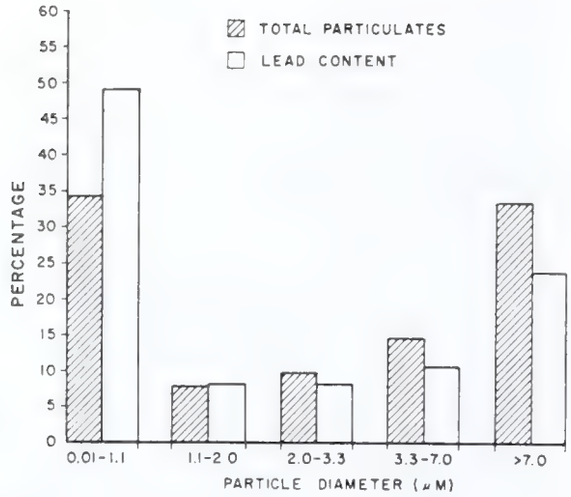
Other sources of lead emissions in the city were investigated, however, no appreciable heavy metals concentrations were found at any of 14 other potential sources.

Determinations of particle size distribution of the particulate matter were made once a month[15] from August 1972 through July 1973 at a site some 250 meters from the smelter with the use of an Anderson particulate-sizing head attached to a high volume sampler. The data collected showed 42% of the particulate mass contained particles below 2.0 μm in diameter. Lead determinations were again made by atomic absorption spectrophotometry of each size fraction collected, and the highest lead concentra-

1. Air lead, cadium,* zinc,* and arsenic† concentrations (suspended particulates), by distance from smelter, El Paso.*



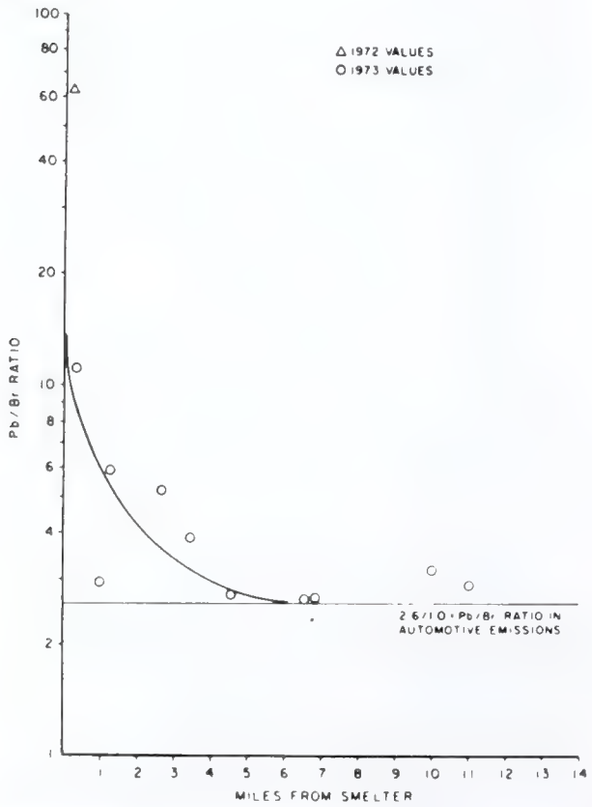
*Annual mean, 1971. †Six-month mean, 1972.



*Mean: August 1972-July 1973. †Mean: January-July 1973.

2. Size distribution and lead content† of airborne suspended particulates, El Paso.*

3. Lead/bromine ratios in airborne particulate samples† in El Paso, February 1972 and April-July 1973.*



*Mean values. †24-hour samples.

tions were found in the particle sizes below 1.0 μm in diameter* (Fig 2).

Commercial gasoline used in automobiles contains an additive tetraethyl lead and the exhaust gases from the combustion of this fuel in an internal combustion engine contain lead and bromine in a ratio of 2.6 to 1.0†.[16] Samples taken from a site 200 meters from the smelter in February 1972 showed a mean lead-bromine ratio of 62.8 and samples taken in May 1973 from the same location had a mean ratio of 11.2.[33] Other samples taken in 1973 at other locations showed the ratio to decrease rapidly with distance from the smelter, and to approach a baseline value of approximately 2.6 at 5 to 6 km from the smelter (Fig 3).

Dustfall samples were collected from October 1970 through July 1971 at the smelter and at ten other sites in the city.[15] Dustfall was greatest at the smelter and decreased with distance from the smelter. Determinations of heavy metal concentrations in the dust likewise showed the highest at the smelter (10 months means, 204 mg/m² per month for lead, 86 for cadmium, 999 for zinc, 553 for arsenic and 1,511 for copper). In areas shielded by the mountains, background levels were observed closer to the smelter than in open areas of the Rio Grande River Valley (Fig 4).

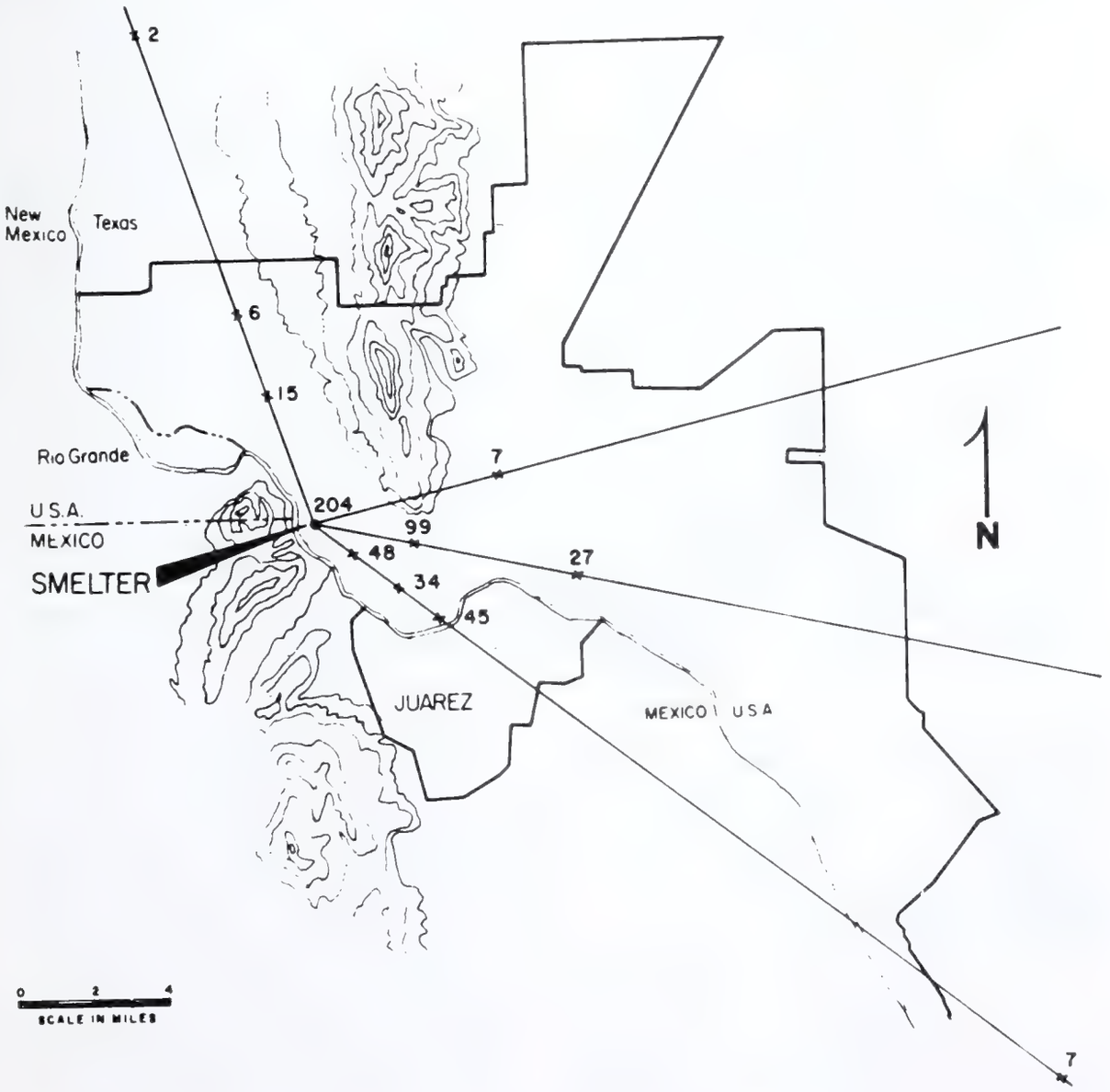
*Respiratory lead absorption is inversely proportioned to particle size. Reports indicate that at least 30% of particles below 2 μm in diameter are retained and subsequently absorbed in the lungs. Between 10 and 30% of particles of 2 to 5 μm, and almost none larger than 5 μm, are retained.[3,32] Large particles, however, may be swallowed, contributing to gastrointestinal absorption.

†Determinations performed by Dr. Jimmy Payne, Texas Air Control Board, Austin, Texas, with use of an x-ray fluorescence technic.

Soil Sampling

After discovering the unusually high concentrations of lead existing in the ambient air surrounding the smelter, it was decided to survey lead concentrations in the soil in the surrounding area. Since lead-bearing particles are heavier in mass, it was believed that this would define the area influenced by the emissions. Soil samples were collected at some 99 sites in El Paso and at three remote sites. Only trace amounts of lead (less than 50 ppm) were found in the soil at the remote sites. Within the city, highest levels in 1972 were found within 200 meters of the smelter. The mean lead level was 3,457 ppm, and the range of lead concentrations found

4. Lead in dustfall (mg/M²/month) El Paso, October 1970-July 1971 (10-month mean values).

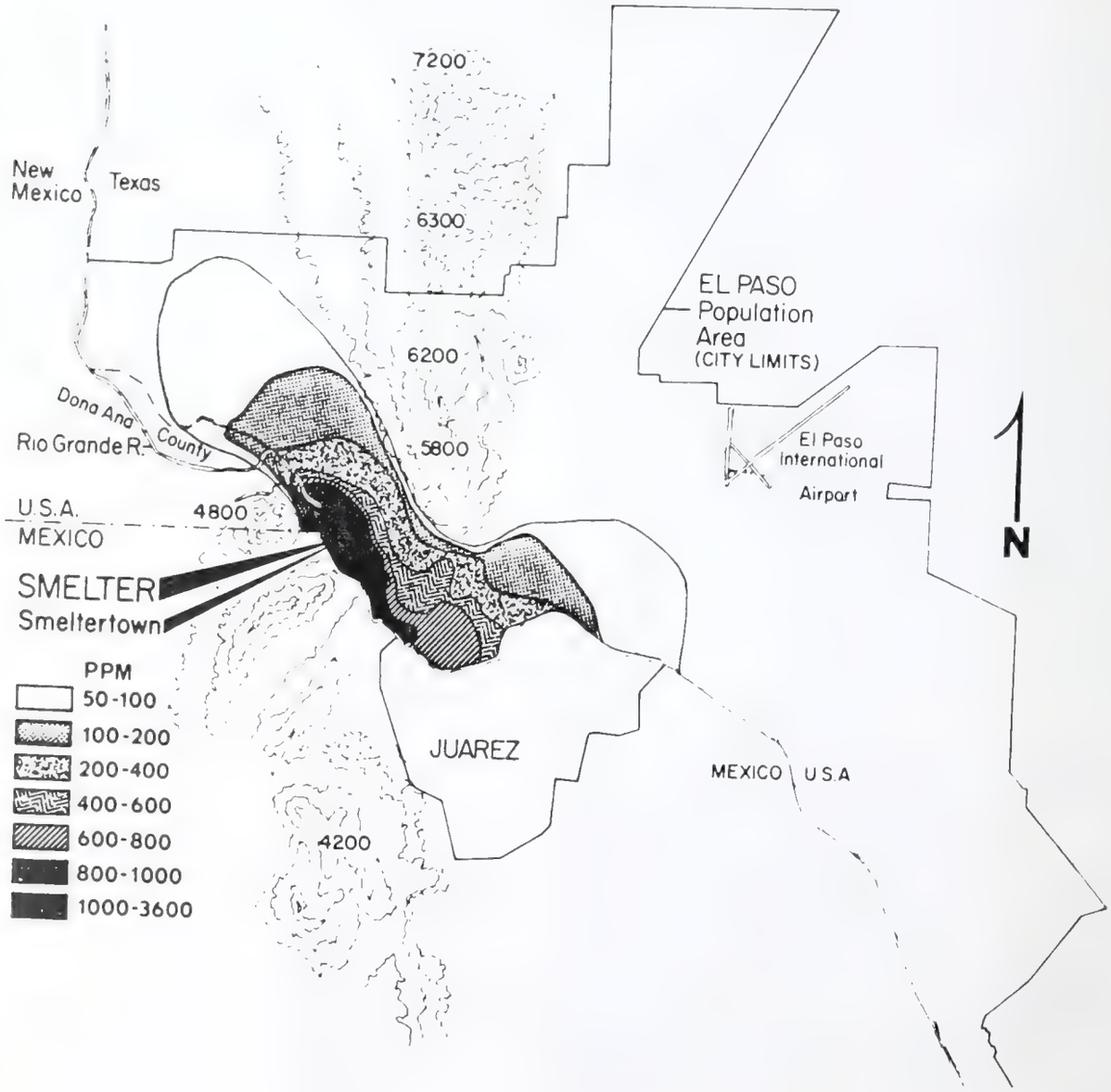


was from 560 to 11,450 ppm. Levels of lead in the soils fell rapidly in the first 2 to 3 km from the smelter, but remained above background levels for as far as 10 km. Similar, but less extensive, distributions were noted for zinc, cadmium, and arsenic. Distribution patterns for all the metals were rechecked in 1973 and were found to be virtually unchanged from the 1972 patterns (Fig 5).

Dust Sampling

Household dust samples also were collected from 51 locations in the city. Highest values of lead concentration were found in Smeltertown, a small housing area adjacent to the smelter. Geometric mean lead content of all samples collected from July 1972 through June 1973 at these locations was 22,191 ppm lead; zinc,

5. Lead surface soil levels in El Paso, Texas, and Dona Ana County, New Mexico.



cadmium, and arsenic levels were also highest in Smeltertown and all levels declined rapidly with distance from the smelter.

Food and Water Sampling

Food and water samples were also obtained and analyzed for lead during our investigation; however, no lead contents of any appreciable amounts were found in these samples.

Human Studies

Initial testing of whole blood lead levels was conducted from January to April 1972. Whole blood lead levels of greater than 40 μg/100 ml were found in 94, or 43%, of 223 persons living within 1.6 km of the smelter, in 28, or 8%, of 363 living from 1.6 to 3.2 km away, and 6, or 1%, of 425 living beyond 3.2 km. A whole blood level of 40 μg or more/100 ml is considered by the surgeon general to be indicative of "undue lead absorption," and a confirmed level of 80 μg/100 ml or more is considered to represent "unequivocal lead poisoning." Four children with blood lead levels of 80 to 90 μg/100 ml were found; all were Smeltertown residents, and their ages were 2, 3, and 4 years, respectively. No children were found to have symptoms of acute lead poisoning.

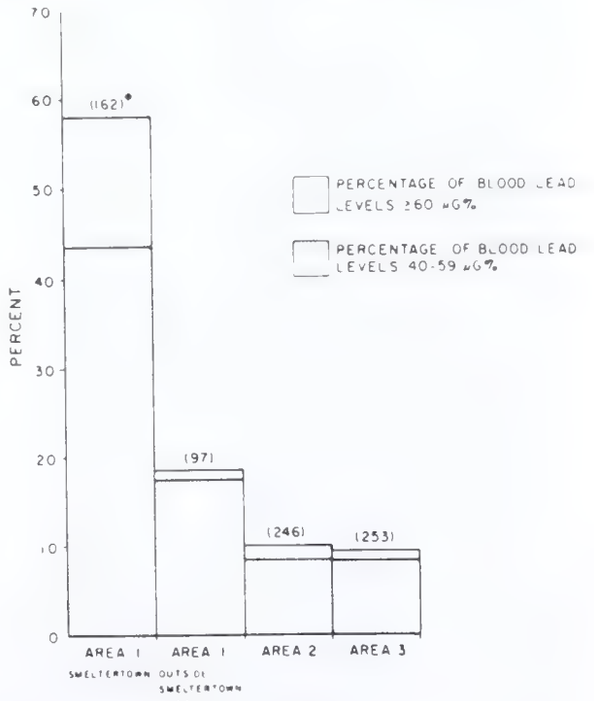
At this point in our investigation, we realized that with our limited facilities and manpower, properly defining the problem and carrying out our responsibilities would require additional assistance. We conferred with the Environmental Protection Agency; Department of Health, Education and Welfare; and the Center for Disease Control and requested assistance.

An epidemiological group from the Bureau of Epidemiology, US Public Health Service, Center for Disease Control in Atlanta, Ga, coordinated by Dr. Philip J. Landrigan, was assigned to assist us in further defining the lead problem in El Paso.

In August 1972, a random sample survey was undertaken in the 13 census tracts most closely adjacent to the smelter to define the distribution of blood lead values more precisely and to determine the environmental influence of the particulate lead on the citizens of this area.

The determinations and findings of the epidemiological group are summarized as follows: The survey area was divided along census tract boundaries into three roughly concentric sections, each 1.6 to 2.6 km in diameter, with the smelter at the center. Area I included Smeltertown, population

6. Distribution of blood lead levels in persons 1-19 years old by area, El Paso, August 1972.



*Number of children tested.

500 (estimated from 1970 United States census data), a cluster of adobe buildings 200 meters from the smelter, as well as Old Fort Bliss, a group of wood and stucco tenement buildings. Mean annual family incomes in the three areas were $7,020, $6,143, and $5,487 respectively (1970 United States census data).

To obtain data on the prevalence of blood lead levels greater than 40 μg/100 ml that would be accurate within plus or minus 5%, we calculated, given an anticipated overall prevalence rate of 10%, that 100 persons would need to be surveyed in each area for each age group. Accordingly, on the basis of family composition data, estimated from the 1970 United States census, 220 households were selected in Area I, 400 in Area II, and 320 in Area III. Because of a paucity of occupied units in Area I, all families were included. In Areas II and III, households were selected by blocks according to the randomization procedure described by Serfling,[17] and approximately 2% of households were so selected. No substitutions were allowed for vacant houses or for families that refused to participate. Of the 940 housing units selected, 107 were unoccupied, and interviews were obtained in 670, or 80.4%, of the remaining 833 units. In the group from 1 to 19 years of age, this survey netted 758 of an anticipated 1,200 individuals. This low count appears to have resulted from a somewhat lower than expected number of children per family and from the high frequency of unoccupied housing units.

From each person surveyed, information was obtained on length of residence at current and previous addresses, occupation or school attended, the average number of hours spent out-of-doors each day, and prior history of blood lead testing or treatment for undue lead absorption or lead poisoning. For children below the age of 5 years, parents were asked whether there was pica. A venous blood sample for lead analysis was drawn (in a lead-free vacuum tube) from all persons 1 to 19 years old and from every second person above that age. Duplicate lead determinations were performed by a modified Delves-cup atomic absorption procedure.[18] If a person in the study population had had a blood lead assay by atomic absorption spectrophotometry within the preceding six months, no new sample was obtained, and instead the results of the prior test were used; that situation applied to 242 persons, all of them from Area I.

In each home visited, paint, particularly on interior surfaces accessible to children, was checked for flaking or teethmarks, and two or more full-thickness paint samples were chipped off for lead analysis.[18] Any pottery vessel used for food preparation or storage was tested for lead release. From each home, one to two surface soil and one to three household dust samples were collected for lead analysis.[18]

The highest blood lead levels were found in Area I; the mean there was shown by analysis of variance with use of an F-test[19] to be significantly higher than the means in Areas II and II ($p < 0.001$). Within Area I the highest prevalence of blood lead levels of 40 to 59 μg/100 ml and also of 60 μg/100 ml and above was noted in Smeltertown. Prevalence rates elsewhere in Area I were between those in Smeltertown and those in Areas II and III (Fig 6). The findings in Areas II and III did not differ significantly from one another.

Highest lead levels were noted in the youngest age groups. In Area I, 55% of

children 1 to 4 years old had levels of 40 to 59 μg/100 ml, and 14% had levels of 60 μg/100 ml or higher (Fig 7); the highest level noted was 83 μg/100 ml in a 2-year-old girl in Smeltertown. Levels in the older age groups were lower; levels greater than 40 μg/100 ml, however, were observed in 27% of children 5 to 9 years, and in 14% of those 10 to 14 years old from the three areas surveyed. Significant differences were noted in all age groups between mean levels in Area I and those in Areas II and III.

Analysis according to sex showed no consistent differences in the groups 1 to 4 and 5 to 9 years of age. From the age of 10 onward, however, mean levels were higher in males. The male-female difference was greatest in Areas II and III, and in all areas it became more highly significant with increasing age.

The frequency of pica was low in all areas. No children in Area I with blood lead levels greater than 60 μg/100 ml gave a positive history for pica, whereas one 3-year-old child in Area II, with a blood level of 63 μg/100 ml, had pica for dirt. No significant relation was formed in any age group between hours spent per day out-of-doors and blood lead level. There were also no significant relations between blood level and school attended or occupation. Three households in the sample population were known to include smelter employees; in none of those were any children with lead levels greater than 40 μg/100 ml found. In Area I a relation was observed between length of residence and blood lead levels; only five, or 18%, of 28 subjects 1 to 19 years old who had moved into Area I in the two years before the survey had blood lead levels greater than 40 μg/100 ml, whereas 56, or 43%, of 130 children who had lived there for two or

7. Survey results and population projections according to area and age group, El Paso, August 1972.

		Survey Results			Population Projections		
Area	Age Group (Years)	No. Tested	% with Blood Lead 40-59 μg /100 ml	% with Blood Lead ≥60 μg /100 ml	No. Persons 1-19 Years of age*	Estimated No. with Blood Lead 40-59 μg /100 ml	Estimated No. with Blood Lead ≥60 μg /100 ml
I	1-4	49	55	14	88	48	13
	5-9	101	34	11	131	44	14
	10-19	109	25	6	203	50	11
	20†	98	16	0			
II & III							
	1-4	83	23	4	4,770	1,092	172
	5-9	124	12	0	6,179	747	0
	10-19	292	3	1	13,123	360	180
	20†	513	3	1			
Totals		1,369	9†	2†	24,494	2,341	390

*From 1970 US Census. †Population-weighted average excluding ages >20 years.

more years had such levels. In Areas II and III emigration from Smeltertown did not contribute importantly to the distribution of blood lead levels; only four, or 8%, of the 49 children in those areas with levels greater than 40 μg/100 ml had moved in within two years, and only one of the four immigrants had come from Smeltertown. No data were obtained on the frequency with which children living outside Smeltertown may have visited there.

Paint Exposure

A total of 1,600 paint samples, 256, 667, and 677 by area, respectively, were collected for lead determination during the random sample survey. A lead content of 1.0% or higher by dry weight was found in at least one paint sample from 30% of the homes studied in Area I, from 35% in Area II, and from 25% in Area III. Within Area I, paint with greater than 1.0% lead was noted in 23% of Smeltertown homes (primarily adobe construction) and in 43% of those outside Smeltertown (primarily frame buildings). Flaking paint was observed in 87 of 95 households examined in Area I, and in 240 of 446 of those in Areas II and III. Paint with teethmarks was noted in 3 of 20 houses examined in Area I, and in 3 of 349 in Areas II and III. The lead content of toothmarked paint tended to be high (means of 2.6% in Area I, and 5.2% in Areas II and III). Blood lead levels of children 1 to 6 years old living in homes with toothmarked paint, however, did not tend to be higher than those of other young children living in the same areas: four of eight children exposed to toothmarked lead paint in Area I had blood levels of 40 to 49 μg/100 ml, whereas the levels in four were less than 40 μg/100 ml. One 4-year-old child in Area II, who lived in a home with 11.1% paint lead content, had a blood level of 61 μg/100 ml, whereas seven other children in Areas II and III who were exposed to as much as 3.4% lead in toothmarked paint all had levels less than 40 μg/100 ml. The exposure rates of children 1 to 4 years old to paint with 1.0% or more lead content were 42, 33, and 30%, respectively, in the three survey areas. The prevalence of a blood lead level of greater than 40 μg/100 ml was nearly the same for children exposed in their homes to paint with 1.0% or more lead as for those without such an exposure (prevalence rates of 32% and 39%).

Pottery Exposure

Pottery vessels were found to have been used for food storage or preparation in 37, or 6%, of the 670 homes visited. The number with a lead release of greater than 100 μg/100 ml was 2 of 6 in Area I, 7 of 19 in Area II, and 3 of 12 in Area III. Another 2 vessels in Area II and 5 in Area III had lead release of 7 to 99 ppm.‡ A positive relation existed between blood lead levels in subjects 1 to 19 years old and lead release from pottery: 6 of 13 children exposed to pottery with lead release of greater than 100 ppm had blood lead levels of greater than 40 μg/100 ml, and the group mean level was 37 μg/100 ml; in contrast, only 1 of 14 children exposed to pottery with lead release below 100 ppm had a blood lead level of greater than 40 μg/100 ml, and the group mean level was 29μg/100 ml.

‡Lead release of greater than 100 ppm was considered capable of causing acute severe poisoning, and release of 7 to 99 ppm might cause chronic poisoning with continued use.[20]

Soil Exposure

A total of 466 surface soil samples were collected—82, 184, and 200 by area, respectively. The geometric mean lead level in the samples from Area I (1,791 ppm) was found to be significantly higher than those in the samples from Area II (684 ppm) and Area III (370 ppm); mean levels in the latter two areas did not differ significantly from one another. In Area I, a significant relation (p=less than 0.05) was found between soil lead content and blood lead levels in subjects 1 to 19 years old (Fig 8). The geometric mean soil content at the homes of children with blood lead levels of greater than 40 μg/100 ml was 2,587 ppm; for children with blood levels below 40 μg/100 ml the mean was 1,419 ppm. This relation was not found in Areas II and III, presumably because of the much lower mean soil lead level.

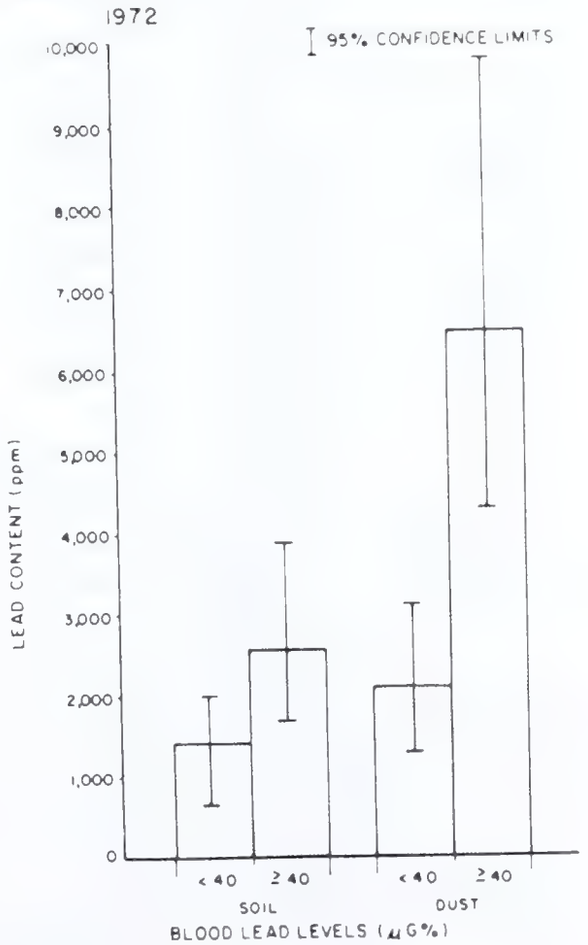
Dust Exposure

Five hundred and ninety-four household dust samples were obtained—106, 234, and 254 by areas. Again the geometric mean lead content was significantly higher in Area I (mean of 4,022 ppm for Area I versus 922 ppm for Area II and 816 ppm for Area III). In Area I a highly significant relation (p less than 0.0001) was noted between the lead content of household dust and lead levels in the blood of children 1 to 19 years old (Fig 8). Children with blood levels of greater than 40 μg/100 ml lived in homes where the geometric mean lead content in dust was 6,447 ppm, whereas those with blood levels less than 40 μg/100 ml lived in homes where dust contained 2,067 ppm. No positive relation was found between household dust and blood lead levels in Areas II and III, presumably because of the much lower mean lead level in dust.

Summary

A whole blood lead level of 40 μg/100 ml was chosen in our study as the criterion of abnormal lead absorption.[21] This value has been shown to be two standard deviations above the mean in populations of children without abnormal lead exposure[22,23] and is the level at which the first biochemical manifestation of lead toxicity becomes evident.[3] With this definition as the criterion, abnormal lead absorption

8. Blood lead levels in 1-19 year olds and household exposure to lead in soil and dust (geometric mean of household values), survey Area I, El Paso, August 1972.



was found in 43.2% of children 1 to 19 years of age, and 52.7% of those 1 to 9 years of age living within 1.6 km of the smelter. Abnormal lead absorption also was found in 9.8% of children 1 to 19 years of age and 17.9% of those 1 to 9 years of age living from 1.6 to 6.6 km from the smelter (Fig 7). From these data obtained in the randomized survey which was intended to be representative of the entire population in the areas surveyed, it is possible to estimate the total number of children in the survey areas who may have had blood lead levels greater than 40 μg/100 ml at the time of the survey. A potential pitfall in this projection is that it is based on a single series of blood samples; thus both biologic and laboratory variations are unchecked by a second series.[21] The large number of samples (758 from children 1 to 19 years) and the fact that duplicate analyses were performed on all might be expected, however, to minimize such potential sources of error. It was projected, on the basis of 1970 United States Census data, that more than 2,700 children 1 to 19 years of age in the areas of El Paso surveyed may have had blood lead levels of 40 μg/100 ml or higher at the time of the survey (Fig 7).

In our study, various potential sources and vectors of absorbed lead were considered. Paint ingestion could not adequately account for the geographic pattern or age distribution of lead absorption in El Paso. Although some children undoubtedly ingested lead-based paint, the content of lead in paint was no higher in Area I than in Areas II and III, and no higher in the homes of children with blood lead levels greater than 40 μg/100 ml than in the homes of those with lower levels. Also, the prevalence in El Paso of paint with a lead content of greater than 1.0% (30% prevalence rate) was much lower than that in the homes of Philadelphia (57%) and New York (76%) children with lead poisoning[4] (Fig 9). Food and water were found to have made no more than negligible contribution to lead uptake. Pottery probably caused lead absorption in some persons, as indicated by the elevated mean blood levels in children exposed to leaded pottery, but pottery was not widely used for culinary purposes, and pottery with a potentially dangerous lead content was found in only 2.8% of the homes visited.

On the other hand, environmental particulate lead or ambient lead levels in the dust had a geographic distribution very similar to that of the blood lead levels greater than 40 μg/100 ml. The highest environmental levels of particulate lead were found in the dust, and a close relation (p less than 0.0001) was observed in Area I between blood lead levels and concentration of lead in the dust (Fig 8). These data were taken to indicate that chronic oral ingestion and gastrointestinal absorption of particulate lead from dust were the major source of lead uptake, at least within 1.6 km of the smelter. Airborne particulate lead also appears to have been readily available for human uptake, and ambient air lead levels in Smeltertown were sufficient to have produced substantial pulmonary absorption (Fig 1).[5,24,25] Transpulmonary uptake may have been further enhanced by the preferential concentration of lead that was noted in the smaller size particles (Fig 2); such preferential concentration has been noted in several previous studies.[26,27] Particulate lead from soil appears to have contributed relatively less to lead uptake in El Paso (Fig 8). It appears that the more

mobile fractions of environment should perhaps focus on these fractions.

Soil lead, although valuable as an index of environmental contamination, appears to be relatively immobile and thus less accessible for absorption. This construct might explain the findings in previous studies of elevated dentine,[28] hair,[29] and blood [31] lead levels in children exposed to high levels of lead in dust or air (or both) and at the same time would explain the failure to demonstrate blood lead levels of greater than 40 μg/100 ml in British children exposed to high concentrations of lead in soil, but in an area of relatively heavy rainfall and negligible air lead content.[30] Although our data on the possible importance of environmental particulate lead need to be corroborated by future studies, they tend to confirm the concept that such lead is biologically accessible and that it may be an important cause of chronic, low-level lead absorption in childhood.[4,5]

We believe our findings indicate that within a 1.6 km radius of itself, the El Paso smelter was the principal source of particulate lead in the environment. It may therefore be concluded that in that area, the smelter was the major source of the lead absorbed by the children. In addition, there is evidence from our soil, air, and dust data, that lead emitted by the smelter had been deposited in the environment at a distance well beyond 1.6 km. Whether such lead may also have contributed to human absorption is less clear; there appears, however, to be no other source of lead in El Paso other than the smelter that can account, in Areas II and III, for the 27% prevalence among children 1 to 4 years of age and for the 12% prevalence among those 5 to 9 years of age with blood lead levels of greater than 40 μg/100 ml. Further studies of possible neurologic and psychologic dysfunction in El Paso children resulting from chronic low-level lead absorption have been conducted.

Today, ambient lead levels in the air of El Paso have been reduced to levels below 2 μg/m^3 except for that area of Smeltertown where we found it necessary to relocate the residents. Continued progress in the reduction of this particulate lead is being presently carried out, and further reduction is projected in El Paso and surrounding areas.

9. Lead content in household dust samples in El Paso, July 1972 to June 1973, as compared with Philadelphia.[28]

Section Studied	No. of Samples	Lead Content (ppm)	
		Geometric Mean	Range
El Paso:			
Distance from smelter (km):			
0.0-1.6	53	22,191	2,800-103,750
1.7-3.2	219	2,124	100-84,000
3.3-6.4	209	1,552	100-29,386
>6.4	48	973	200-22,700
Philadelphia:			
Urban industrial area	16	3,855	929-15,680
Urban residential area	4	614	293-939
Suburban area	4	830	277-1,517

Readers may be interested in an article describing lead absorption in children living near a smelter in Toronto, Ontario, Canada, which has been published recently in *Science*.[34]

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Dr. Rosenblum, Director; Mr. Shoults, Environmental Engineer; Mr. Candelaria, Laboratory Director, El Paso City County Health Unit, 222 S. Campbell St., El Paso, Texas 79901.

Ornithosis (chlamydiosis) outbreaks in Texas

M. S. Dickerson, MD; W. R. Bilderback, DVM; L. W. Pessarra, DVM

Psittacosis originally was described as a disease of birds of the family psittaciformes, and for the most part found in the tropics. The transportation of these exotic birds into temperate zones began about 1850, contributing to a widespread distribution of the virus.

Between 1879 and 1928, ornithosis outbreaks were observed in Europe, America, and Australia; all were associated with imported parrots and exotic birds.

In 1930 investigators in Great Britain, Germany, and the United States made one of the first important breakthroughs in virology when they discovered the ornithosis virus.[4] In 1935, Levinthal described the elementary bodies in the endothelial cells of inoculated animals.[2] Simultaneously the same virus and elementary bodies were discovered as the etiological agent in human psittacosis. Recently the organism has been reclassified as a bacterium and is called *Chlamydia psittaci*,[5] hence the disease in domestic fowl is now referred to as chlamydiosis.

Although sporadic cases of human ornithosis have been reported in Texas since 1930, it was not until October and November of 1948 in Giddings (Lee County) that the first explosive outbreak of human ornithosis occurred associated with poultry processing. This outbreak was investigated and studied by a team from the Texas State Health Department.

The findings revealed that there were 85 human cases and three deaths.[3] The season was just before Thanksgiving when large numbers of turkeys were being processed. All humans who got sick had been handling turkeys on the processing line. On the basis of onset of illness and flock processing records, a specific flock was suspected.

The second major outbreak occurred in the same Giddings plant in December of 1951 and January of 1952. There were 44 cases and four deaths, and the explosiveness of the outbreak suggested a common source. It was established for the first time that there was a relationship between human illness and the type of work. All the patients worked in the killing, picking, and eviscerating operation. It appeared that both airborne infection and direct contact were important in the method of transmission of infection. This outbreak occurred during the pre-Christmas processing period.

Still a third outbreak in the same plant occurred in April and May 1952; there were 19 cases but no deaths. This outbreak occurred during the post-egg-laying period (April and May) when large numbers of turkey hens are processed. All human cases were confirmed by serological studies. Suspensions of tissue from infected turkeys were injected into the intraperitoneal cavities of white Swiss mice. Ele-

1. Human chlamydiosis outbreaks in Texas associated with turkey processing.

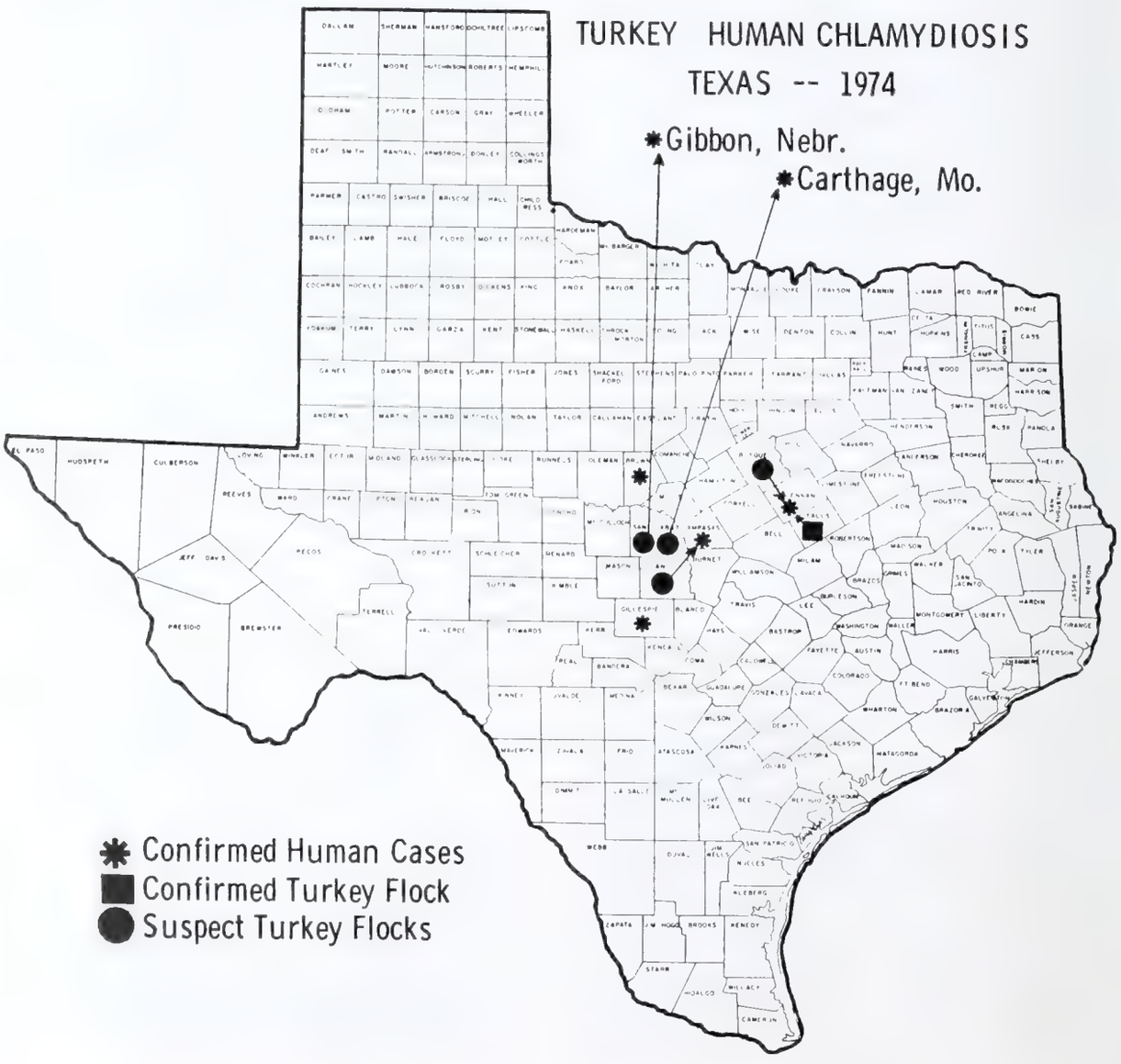
Year	County	Outbreaks	Humans Ill	Human Deaths
1948	Lee	1	85	3
1951	Lee	1	44	4
1952	Lee	1	19	0
	Wharton	1	11	0
1954	Navarro, McCulloch, Lampasas, Williamson, Comanche	*	200	0
1956	Harris	2	34	0
1961	DeWitt-Lavaca	2	20	0
1974	Lampasas	1	40	0
	McLennan	2	36	0
	Gillespie	1	3	0
	Brown	1	2	0

*During investigations 12 turkey flocks were found to be infected through isolation of the agent.

mentary bodies characteristic of the ornithosis agent were demonstrated in tissue smears stained by the Giemsa method. In December 1952 and January 1953, 11 cases of ornithosis occurred in a poultry processing plant in El Campo, Texas; there were no deaths.

In 1954, 200 cases of human ornithosis were reported in outbreaks scattered throughout central Texas, namely in Corsicana, Brady, Lampasas, Taylor, and Comanche.[1] All 1954 outbreaks occurred near the end of the egg-laying season. The highest attack rates were in those employed as eviscerators, and in pickers who were exposed to airborne infection. In most of the 1954 outbreaks the infected flocks were located. The virus was recovered from

2. Turkey human chlamydiosis, Texas, 1974.

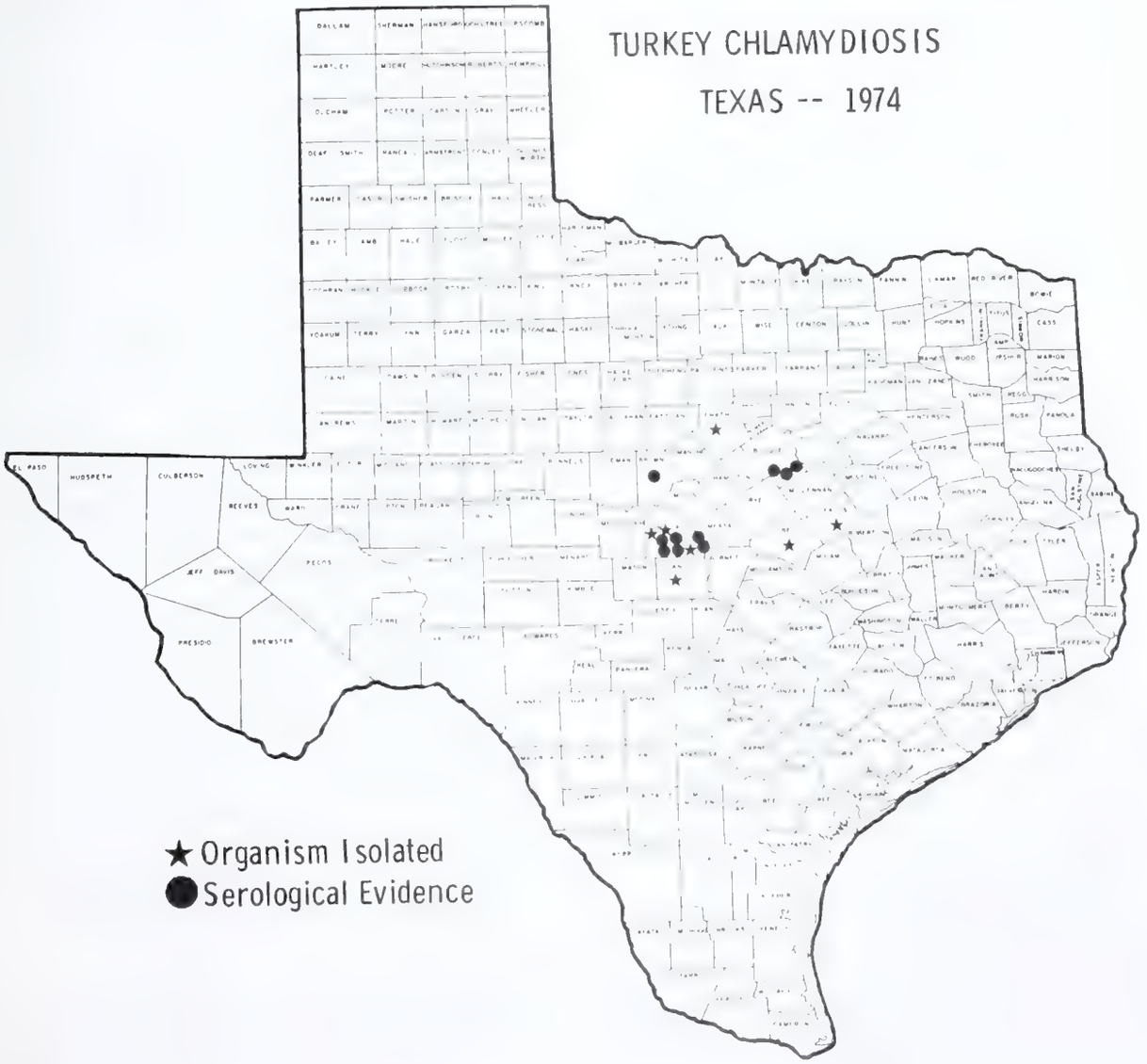


turkeys on at least 12 farms in three areas of the state.

In 1956 there was an outbreak of 34 cases of human ornithosis in two turkey processing plants in Houston; there were no deaths.

On Nov 7, 1961, 20 people working in a Yoakum poultry processing plant had become ill with an influenza-like disease, characterized by chills, fever, headache, weakness, and cough. A public health team consisting of a physician, veterinarian, and a laboratory technologist investigated the outbreak. Accurate records at the processing plant gave much of the necessary basic information, such as employee absenteeism, age, sex, and race information, date of onset of illness, name

3. Turkey chlamydiosis, Texas, 1974.



of attending physicians, work location of employees, number of condemnations, dates when specific flocks were processed, and other important data. The dates of onset of the disease and the possible span of the incubation period in human ornithosis focused suspicion on two flocks of turkeys processed ten days to two weeks prior to the onset of the disease in humans. The team visited the premises from which suspected infected turkeys were sold to the plant. On one lot there were six dead turkeys and many sick ones. On a second farm several miles away there were sick birds. On both farms sick turkeys were autopsied. Widespread pathological changes were found: The pericardium was covered with a white fibrinous exudate; the pericardial sac was distended with yellowish fluid; the spleen generally was enlarged; the liver was mottled in appearance; the air sac was covered with fibrinous exudate and was opaque; and the serous membrane generally was covered with a yellowish-white exudate. Blood specimens for complement fixation tests confirmed the human cases. Mouse inoculations were made from the emulsified viscera of the diseased birds. The presence of inclusion bodies was confirmatory.

In recent years, Texas A & M University has made laboratory services available to turkey breeders throughout the state. Whenever an illness is noted in a flock, the bird is dispatched promptly to the diagnostic laboratory. Continuous surveillance of the turkey-raising industry since the major ornithosis outbreak in Yoakum in 1961 failed to establish a single chlamydiosis diagnosis up until 1974.

Beginning April 20, 1974 and continuing through June 18, 1974, laboratory confirmation of chlamydiosis was established in turkeys from seven different central Texas breeding farms. Turkeys from the several breeding farms had been processed in four plants in Texas, one in Missouri and one in Nebraska.

The first evidences of human infection was of explosive nature, occurring in employees of a turkey processing plant in Lampasas. From May 1 to May 21, 40 of 180 employees (22%) developed illness compatible with ornithosis with symptoms of fever, headache, cough, and lethargy; one patient had an atypical pneumonia. Fourteen cases were finally confirmed by complement fixation tests. There were no deaths. The specific turkey flock was identified by records and examinations as the source of the outbreak.

Simultaneously, another outbreak developed in a Waco poultry processing plant. There were two separate introductions of diseased turkeys in the Waco plant. Diseased turkeys delivered to their plant just before May 1 accounted for 22 human cases with onset of illness ranging from May 8 to May 14. Diseased turkeys slaughtered from May 17 to May 21 accounted for 14 human cases developing between May 28 and June 5.

By means of records and dates of onset of human illness, the farms from which both lots of turkeys orginated were traced. Turkeys remaining on the farms had evidences of chlamydiosis.

About May 28, 12 out of 125 employees became ill with symptoms compatible with ornithosis at a Carthage, Mo, turkey processing plant. From June 18 to June 21, 20 of 80 employees (25%) became ill in a Gibbon, Neb, plant. Epidemiological tracing of both of these sources indicates the infected turkeys were imported from farms in central Texas. One Nebraska patient died.

Three cases of ornithosis occurred in a poultry processing plant in Fredericksburg in July. The most likely source were flocks

processed between June 24 and July 3, originating from farms in San Saba County. Also, two human cases were found in a poultry processing plant in Brownwood.

Flocks in which chlamydiosis has been established are quarantined by the Texas Animal Health Commission. The flock is treated for 21 days with 200 gm Aureomycin per ton of all mash ration. This is followed by a withdrawal period of 48 hours to eliminate drug tissue residue before the birds are released for slaughter.

The 1974 human cases of ornithosis continue to pinpoint the most vulnerable areas in the processing plant wherein infection is most commonly acquired, namely the killing, picking, and eviscerating operations. Some cases were noted to have worked in the hanging area and unloading dock. The virus can be acquired in any area of poultry processing where aerosol is present.

No additional human cases of poultry-associated ornithosis occurred after July 10, 1974. Although this turkey chlamydiosis outbreak probably lasted longer than any previous one in Texas and was quite devastating to the turkey industry, there were fewer human cases as compared to previous outbreaks. Perhaps the *main reason for lessened human morbidity* and in contrast to previous ornithosis outbreaks, *this one was detected first among turkey flocks, thus enabling improved surveillance and preventive measures* to be strengthened within the labor force in the handling and processing of poultry.

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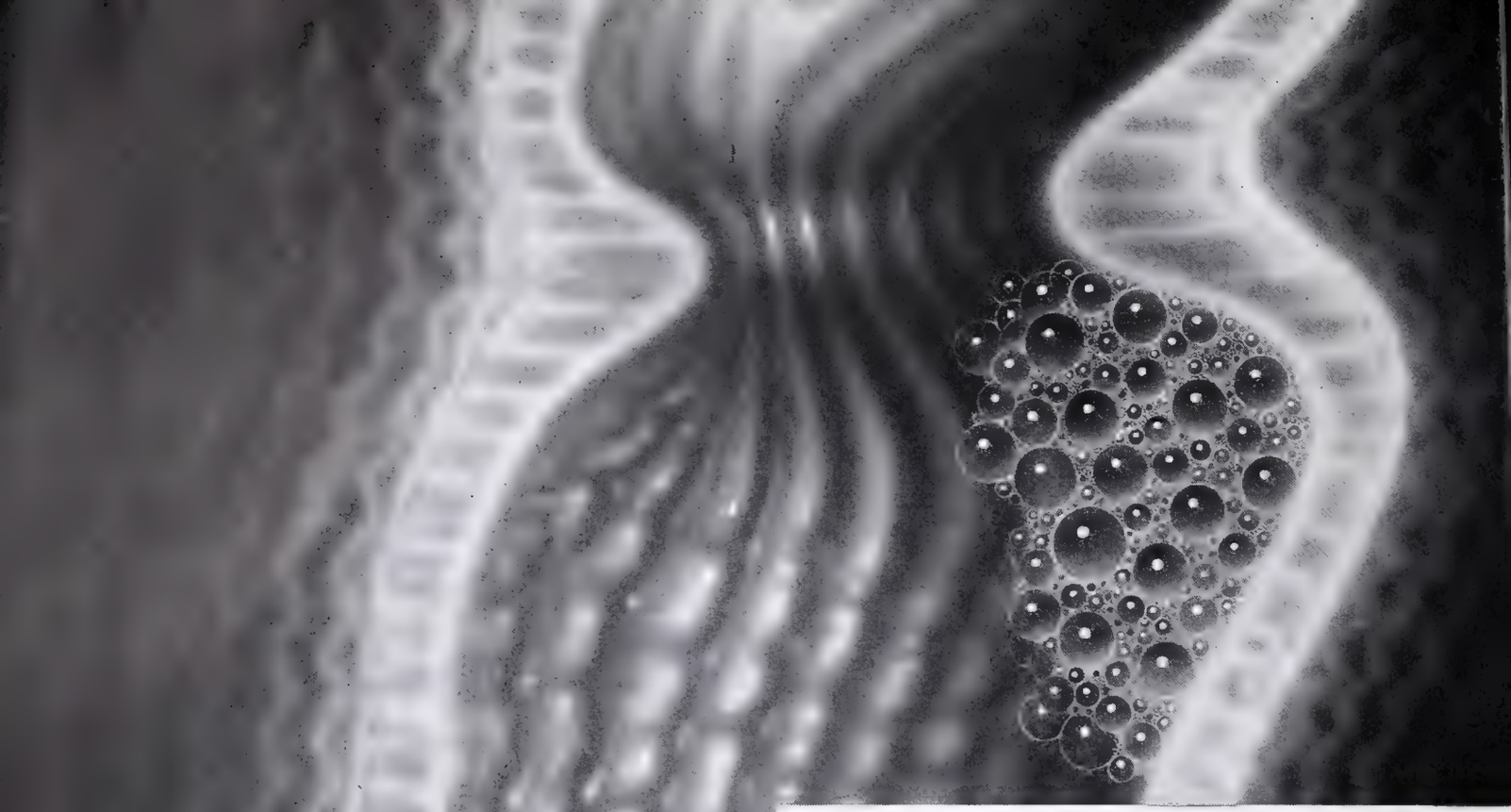
The authors, Texas State Department of Health Resources, 1100 West 49th St., Austin, Texas.



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Each scored tablet contains: specially activated simethicone 25 mg., hyoscyamine sulfate 0.1037 mg., atropine sulfate 0.0194 mg., hyoscine hydrobromide 0.0065 mg. (equivalent to belladonna alkaloids [as bases] 0.1049 mg.) and butabarbital sodium N.F. 16 mg. (Warning: may be habit forming.)

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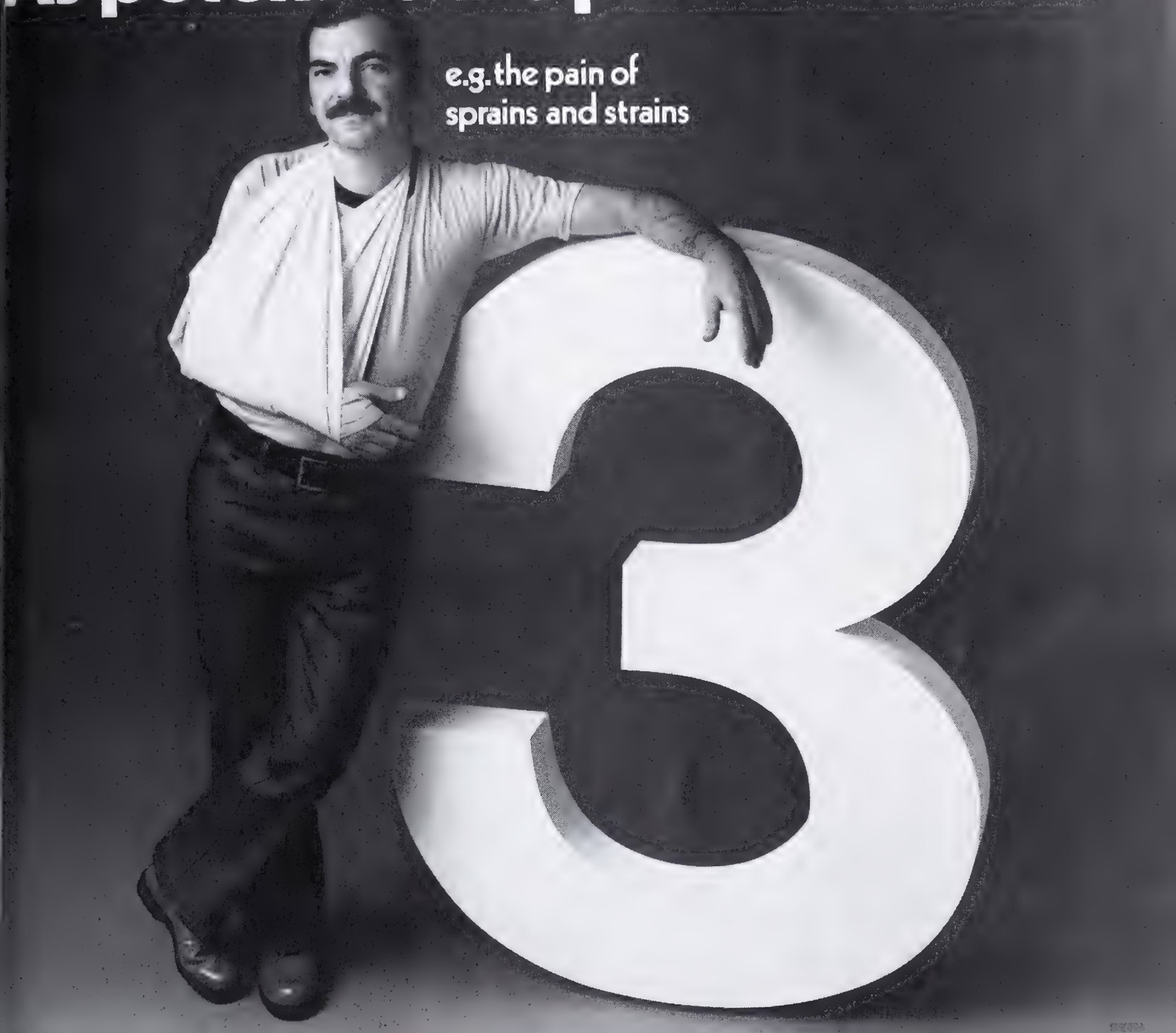

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- addiction liability low

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Effectiveness across the spectrum of most common forms of insomnia

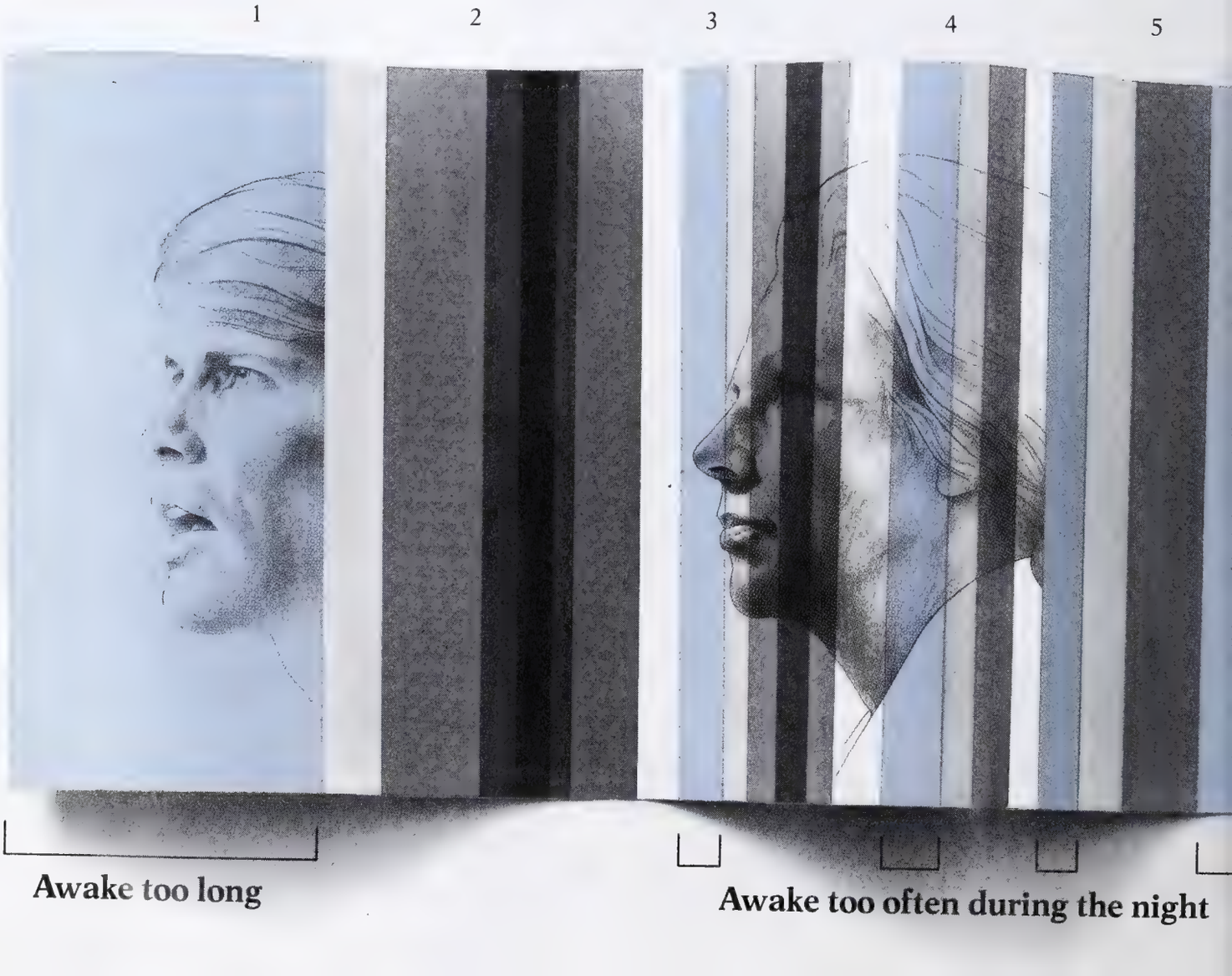
Awake too long, awake too often, awake too early...

These are the most common forms of insomnia, and may occur singly or in any combination. The night of troubled sleep depicted here comprises all three types. As the night progresses from left to right, each sleep stage is identifiable by its own shade of gray. Blue represents "Awake."

As you can see, this hypothetical "patient" takes well over an hour to fall asleep, awakens several times during the middle of the night and awakens too early in the morning.

Sleep Stages

- Awake
- REM
- Stage 1
- Stage 2
- Stage 3
- Stage 4



The insomnias most often occurring in young and older adults

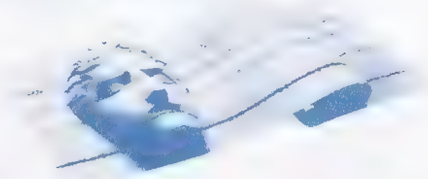
For patients with trouble falling asleep (common in young adult insomnia patients), Dalmane (flurazepam HCl) 30 mg provides sleep within 17 minutes, on average. For those with trouble staying asleep or sleeping long enough (common in those over 50), Dalmane offers increased total sleep time with fewer nocturnal awakenings. These clinical results were demonstrated in studies conducted in four geographically separated sleep research laboratories.[1-4]

The relative safety of Dalmane (flurazepam HCl) is well documented

Dalmane (flurazepam HCl) is relatively safe and well tolerated; morning "hang-over" has been infrequent. The usual adult dosage is 30 mg; in elderly or debilitated patients, limit initial dosage to 15 mg to preclude over-sedation, dizziness or ataxia. Caution patients about possible combined effects with alcohol and other CNS depressants.

Broad-spectrum medication for the most common forms of insomnia

Awake too early



Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.*— usual adult dosage
(15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.

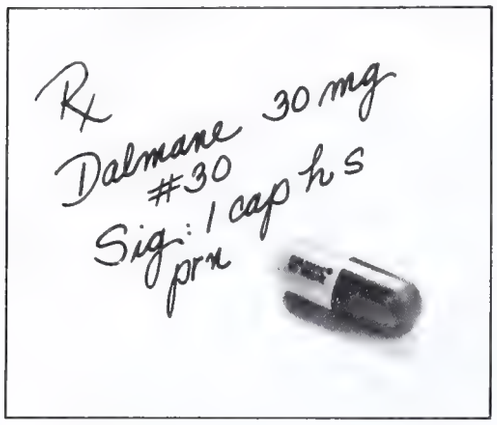
- ☐ induces sleep rapidly
- ☐ reduces nighttime awakenings
- ☐ lengthens total sleep time

ROCHE

Please see following page for a summary of complete product information.

Broad-spectrum medication for the most common forms of insomnia

Dalmane®
(flurazepam HCl) Ⓒ IV



Objectively proved in the sleep research laboratory, Dalmane

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- provides 7 to 8 hours sleep, on average, without repeating dosage

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum benefic effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

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*First Health and Nutrition Examination Survey, DHEW Pub. No. (HRA) 74-1219-1, National Center for Health Statistics, Rockville, Maryland. (This report indicates that approximately 95% of the children 1-5 years old had iron intakes *below* the standard set by the Food and Nutrition Board of the National Academy of Sciences.)

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Salicylanilide photocontact dermatitis

Donald E. Hazelrigg, MD; Ross H. Daniel, MD; Andrew H. Rudolph, MD

Two patients with photocontact dermatitis to halogenated salicylanilides are presented. Histopathology of the clinical eruption and the histopathology of the photo-patch test sites are described. The technique of photo-patch testing is reviewed and treatment of salicylanilide photocontact dermatitis discussed.

Introduction

At one time halogenated salicylanilides were extremely common antibacterial agents added to soaps, shaving lotions, medicinals, shampoos, and cosmetics. Even though salicylanilides and related compounds have been banned from such use because of their highly photosensitizing properties, salicylanilide-induced photocontact dermatitis continues to be a problem.

Case Reports

Case 1: A 44-year-old man was seen in August 1974 for evaluation of an eruption present intermittently for ten years on the face, neck, and arms. The eruption was erythematous, slightly edematous, and limited to areas exposed to sun. The past medical history revealed diagnoses of chronic alcoholism, allergic asthma,and passive dependent personality. Results of physical examination were normal except for expiratory wheezes on auscultation of the chest, and nontender hepatomegaly. Laboratory studies, all with normal results, included complete blood cell count, red blood cell indices, platelets, sedimentation rate, VDRL, electrolytes, blood urea nitrogen, glucose, blood gases, lupus erythematosus cell preparation, antinuclear antibodies, urinalysis, sputum for acid-fast bacilli, and 24-hour urine for uroporphyrins. Serum glutamic-oxalacetic transaminase and alkaline phosphatase were elevated. Roentgenogram of the chest was suggestive of hyperinflation and a pulmonary function test revealed severe airway obstruction. A punch biopsy revealed chronic dermatitis. Photo-patch testing was performed.

Case 2: A 50-year-old black male truck driver was seen in August 1973 for a cutaneous eruption, confined to the sun-exposed areas, present for two months. Abnormal physical findings include sharply demarcated hyperpigmented patches on the face and neck. The suborbital and submental areas were not involved. A hyperpigmented eczematous eruption was visible on the ears, extensor forearms, and hands.Bilateral cervical and axillary adenopathy was present. Normal laboratory data included complete blood cell count, SMA-12, SMA-6, urinalysis, and chest x-ray. Skin cultures yielded *Staphylococcus aureus* and beta-hemolytic streptococcus. A punch biopsy revealed chronic dermatitis. Photo-patch testing was performed.

Photo-Patch Testing Methods

On day one, the following ten materials were applied to Al-Test* patches and fixed to the patient's back with Blenderm tape in two vertical rows:

1. 3,4′,5 tribromosalicylanilide (TBS)
2. 3,5 dibromosalicylanilide (3,5 DBS)
3. 4′,5 dibromosalicylanilide (4,5 DBS)
4. 2′,3,4′,5 tetrabromosalicylanilide (TBSA)

From the Department of Dermatology, Baylor College of Medicine, Houston, Texas, and the Section of Dermatology, Veterans Administration Hospital, Houston, Texas 77031.

*Al-Test is a unit consisting of a cellulose disc attached to polyethylene-coated aluminum foil.

5. 3,3,4′,5 tetrachlorosalicylanilide (TCSA)
6. Hexachlorophene
7. Bithionol
8. 3,4,4′ trichlorocarbanilide (TCC)
9. 4,4′ dichloro-3-trifluoromethylcarbanilide (TFC)
10. White petrolatum (control)

All materials were in white petrolatum base in 1% concentration except for TCSA, which was 0.1%. In addition, in case 1, the patient was photo-patch tested with Irish Spring soap solution in four different concentrations: 0.1%, 0.5%, 1.0%, and 2.0%. One row of patches was covered completely with black electrical tape to prevent accidental light exposure and serve as the control set.

On day two, the row of patch tape plasters not serving as the control was removed and the area was irradiated with a bank of fluorescent black lights at a distance of 25 cm for 40 minutes. The covered control set row was left untouched.

On day three, the control patch test row was uncovered and both sets of patch tests sites were inspected and graded as no reaction or negative, weak (nonvesicular) erythematous reaction (1+), strong edematous or vesicular reaction (2+), and extreme reaction (3+). Both rows of patch test sites were again inspected and graded on day four and on day seven.

Results of Photo-Patch Tests

In case 1, the patient had a 2+ reaction at all of the salicylanilide patch test sites. The smallest raised erythematous area was 11 x 12 mm and the largest 20 x 20 mm. The covered row, control sites, and commercial soap solution sites were negative. A punch biopsy of the TCSA site revealed a spongiotic epidermis, edematous dermis, and a perivascular lymphocytic infiltrate compatible with subacute dermatitis. In case 2, the patient had a 3+ reaction to 4′, 5 BSA and TCSA and a 2+ reaction to 3,5 BSA at 72 hours. The covered row and control sites were negative.

Comment

Wilkinson, in 1961, published the first report of photodermatitis in 53 patients caused by TCSA in two new soaps.[1] Numerous other reports followed, resulting ultimately in the removal of TCSA from commercial soap products. Bithionol, first reported as a contact photosensitizer in 1963,[2] also has been withdrawn from the market. Other related compounds, for example, TBS[3] and TCC,[4] subsequently have been found to be photosensitizers and their distribution has been restricted. Cross reactivity between these different compounds has also been demonstrated.[5] By photo-patch testing, Harber and associates[6] found the action spectrum of salicylanilides to be in the long ultraviolet range (320-450 nm) and not in the sunburn range (290-320 nm). Subsequently, this has been confirmed by numerous other investigators.

Clinically, photocontact dermatitis presents as a papulovesicular, eczematous, or exudative reaction occurring chiefly in the sun-exposed areas such as the face, neck, dorsum of hands, and the surface of the extensor forearms (Fig 1). However, any skin area receiving sufficient light may manifest a clinical reaction. In women, the anterior legs may be involved. In men, the left arm and left side of the face and neck may be more severely involved than the right because of time spent driving the automobile.

The histologic findings vary with the clinical pattern and are those of acute,

Face (except upper eyelids and upper lip under nose)
Neck (except submental)
"V" of chest
Forearms (lower extensor surface)
Hands (dorsum)
Lower legs (women)
Dorsum, feet (women)
Shaded areas of body spared

1. Photocontact dermatitis distribution.

I. Antibacterials
Halogenated salicylanilides
Bithionol
Carbanilides
Hexachlorophene
Dichlorophene
II. Medicaments
Phenothiazines
Sulfonamides
Local anesthetics
Sun screens
Chlorsalicylamide (fungicide)
Tar
III. Plants (most contain furocoumarins)
Umbelliferae (celery, carrot, parsley, parsnip)
Rutaceae (lemon, lime, bergamot oil)
Moraceae (fig)
Luguminosae (babchi)
IV. Miscellaneous
Optical bleaches
Eosin (lipstick)
Quinine (hair tonic)
Dyes (acridine)
Cadmium

2. Contact photosensitizers.

subacute, or chronic dermatitis. If the eruption is long standing, the findings are those of chronic dermatitis: acanthosis, hyperkeratosis with areas of parakeratosis, slight intercellular edema in the epidermis, and an upper dermal perivascular infiltrate with predominance of lymphocytes. Although the picture is nonspecific, it is suggestive of a photosensitivity reaction because of the patchy character of the infiltrate.

Of the many compounds capable of causing photocontact dermatitis (Fig 2), salicylanilides are among the most common. The salicylanilides, developed for their antibacterial activity, are members of the polyphenolic group, which structurally consist of two benzene rings connected by a bridge and halogen atoms and phenolic OH groups on at least one of the rings.[7] Other members of the group include hexachlorophene, carbanilide, bithionol, and fenticlor. The bactericidal activity and skin binding power varies according to the position of the halogen atoms. Salicylanilides were found to be particularly good antibacterial agents because of their water insolubility and firm binding to epidermis. However, this can be a disadvantage if sensitivity develops, as an antigenic depot effect occurs with chemical evidence of their persistence in affected skin for several months.[8]

Two theories have been proposed to explain the pathogenesis of photocontact dermatitis: (1) photo-induced decomposition products which are allergens, and (2) photo-induced free radicals which combine with skin proteins to form the allergen. In either case, it is now thought that the allergen formed then causes an allergic reaction mediated by immunocompetent cells, comparable to the events in an ordinary allergic eczematous contact dermatitis.

Photo-patch testing is helpful in diagnosing photocontact dermatitis. One may use as the patch test antigen the suspected compound as a 1% concentration in white petrolatum. Because of its high photosensitizing properties and possibility of induction of photocontact dermatitis, TCSA should not be used for general screening purposes unless photoallergy to this compound is strongly suspected. It then should be used in a concentration of 0.1%. Cosmetics may be applied as available commercially. Soaps and solutions may be tested as a 1.0% to 5.0% concentration in water or white petrolatum. The light source used in photo-patch testing must emit wave lengths in the longer ultraviolet range (over 320 nm) as maximum photosensitivity to the halogenated salicylanilides is in the region of 360 nm.[6] Fluorescent black light tubes (Westinghouse, General Electric, Sylvania) which emit wave lengths in the 320-450 nm range are an ideal light source. One may also use a hot quartz mercury vapor lamp (Hanovia), but a windowglass filter must be used to block the wave lengths in the shorter ultraviolet range—290-320 nm—which are erythemagenic and will cause severe sunburn with the exposure time needed for photo-patch testing.

Therapeutically, avoidance of sun exposure is an absolute necessity for patients with photodermatitis. Protective clothing such as long sleeves and hats should be worn. Sufficient light to cause dermatitis will get through some light clothing. This occurrence may sometimes confuse the clinical pictures as well. Sun screens which block out the long ultraviolet wave lengths, for example, red veterinary petrolatum (RVP) and benzophenones are also quite helpful. The acute phase of photodermatitis should be treated as any other type of acute dermatitis, with topical or systemic corticosteroids, or both. The patient must be instructed to discontinue use of the offending agent and, in addition, to avoid all products which contain antibacterial additives such as the salicylanilides and related compounds. Most photocontact eruptions will respond to this treatment program. Unfortunately, however, a few patients will become persistent reactors to sunlight and may remain sensitive for a number of months or years.

Although many halogenated salicylanilides are no longer found in commercially available products, photosensitivity to these agents will continue to appear because of the availability of older products still on the market or in the household which contain these sensitizing agents, or because of cross reactivity to numerous compounds present in yet available products.

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Dr. Rudolph and Dr. Daniel, Baylor College of Medicine, Department of Dermatology, Houston, Texas 77025. Dr. Hazelrigg, Welborn Clinic, 421 Chestnut St., Evansville, Ind 47713.

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The fetal alcohol syndrome

Gilbert E. Corrigan, MD, PhD

The ill effects of ethanol upon pregnancy have been rediscovered.[1-5] Although Greek and Roman literature spoke of the deformation of human growth by maternal consumption of alcohol, and despite the fact that numerous scientists of the 1800s and 1900s recognized the retardation in both human and animal species growing in the presence of maternal alcoholism, little recent attention has been given to the phenomenon.[6-8] With the recent publication by the dysmorphology unit of the University of Washington, (David J. Smith, MD) the fact of a fetal alcohol syndrome is well established.[1-5]

The fetal alcohol syndrome is the clinical occurrence of mental retardation, growth failure, and certain physiognomic, anatomic, and physiologic features characteristically found in about one-half of the infants of severely alcoholic mothers. As is true in most syndromes, there is no one unifying observable feature, but rather a complex of morphological and behavioral features which form the syndrome. These are readily recognized and allow the distinction of the syndrome which now is the third leading cause of mental retardation in Seattle, Washington, where it was first described and is presently recognized.[1-5]

After the first description of the syndrome in 1973, several other workers provided additional cases which corroborate the initial description.[9-10] Palmer and associates, while demonstrating the growth retardation, microcephaly, and physical malformations of the progeny of alcoholic mothers, also demonstrated that there is little evidence for a malnutrition factor or genetic factor being responsible for the syndrome.[9]

There is solid evidence that alcohol readily crosses the blood-brain and placental barriers of the fetus. Both alcohol labeled with radioactive carbon (C^{14}) and blood sample specimens have demonstrated that the alcohol passes from the maternal circulation to the fetus in approximately the same concentration as in the mother.[11-12] Clinical demonstration of neonatal alcoholic withdrawal supports these findings.[13-14]

The effect of alcohol is direct toxic damage to the fetus.[8] The generalized nature of the changes seen in the fetal alcohol syndrome support this concept. The syndrome is heralded at birth by an increased incidence of breech deliveries. The infant is small in length in comparison to weight. The ponderal indices for the infants with the syndrome have been within normal limits for gestational age, while most affected infants have been below the third percentile for weight, height, and head circumference.[3,15] There is no definitive study of the placentas from these pregnancies, although severely alcoholic mothers have a fatal fetal outcome in a significant proportion of their pregnancies. Jones, Smith, Streissguth and Myrianthopoulos recorded a 17% perinatal mortality in one study group.[5]

Many of the mothers seem to share common characteristics beyond abnormally heavy alcohol intake. These include advanced age (28-32 years) low average weight change during pregnancy (with many actually losing weight), and the occurrence of cirrhosis, delirium tremens, and nutritional anemia.[3] Prospective studies of heavy drinking mothers with well-known drinking habits and other biological parameters are not available, and they should provide valuable statistics when they are performed. At the present time the data from the alcoholic mothers indicate that all are heavy drinkers with

"excessive" alcohol intake. There has been no suggestion that the syndrome occurs in other patterns of maternal alcoholism such as light or moderate "social drinking." Additionally, the effects of alcoholism on human spermatogenesis and paternal factors are not known. The effects of these forms of alcoholic consumption on the infant are not known.

The infants with the fetal alcohol syndrome are recognizable initially by their short palpebral fissures and microcephaly. Further analysis demonstrates a more profound set of deviations which includes epicanthal folds; maxillary hypoplasia with relative prognathism; joint anomalies which limit the motion at the elbow, interphalangeal, and metacarpophalangeal joints; hip dislocation; cardiac anomalies; altered palmar crease patterns; asymmetric ptosis; anomalous external genitalia; capillary hemangiomata; cleft palate; and micrognathia. The infants exhibit prenatal and postnatal growth deficiency associated with intellectual and motor development delay. This retardation is recognizable at birth and is irreversibly fixed.[4] Studies of infants with fetal alcohol syndrome have demonstrated borderline-to-moderate mental deficiency in 44% of the cases. This represents the most frequent problem in surviving children and is usually accompanied by microcephaly. There is no report to date of the pathologic findings in autopsied infants with the fetal alcohol syndrome. The one fetal alcohol syndrome brain studied (Dr. Frederich Harvey, University of Washington) demonstrated a serious disorientation of both neuronal and glial elements with incomplete cortical development.[4]

The abnormalities of central nervous system development are indicated by the behavior of the infants. They are tremulous and exhibit fine motor dysfunction. They suck poorly and are awake more and sleep less than is usual for their age. These latter two behavioral phenomena, poor suckling and irregular sleeping, provide an added burden to the already compromised alcoholic mother. Serious iron deficiencies have been noted in some alcoholic mothers, but the deficiency has not been linked to a fetal-neonatal-infant congenital condition such as is seen with the fetal alcohol syndrome.[4] However, more data on the maternal alcohol-nutrition interaction are needed.[11]

Perhaps the most critical aspect of the fetal alcohol syndrome is the failure on the part of the surviving infants to achieve normalcy in the indices of intelligence (mental deficiency), motor age estimate, and social quotient.[3] The older children with the syndrome are described as having tremulousness, weak grasp, poor coordination, and are often observed to engage in repetitive self-stimulating behavior such as head banging and rocking. When the child with fetal alcohol syndrome has been reared outside of the maternal alcoholic environment, there has been no significant return to normal intelligence in the limited number of cases studied to date.[3]

Green has reviewed the animal studies of the fetal alcohol syndrome and finds that more data are needed on both the incidence and effects of alcohol.[8] Animal studies utilizing behavioral, biochemical, and anatomical studies of the offspring of alcoholic miniature pigs are in progress at the University of Missouri Sinclair Comparative Research Farm. The interrelationships between the physical and mental factors have to be worked out as it is not known whether they are independent or interrelated.

One must be careful not to confuse this syndrome with other named syndromes. Already Hall and Orenstein have noted that most of the major craniofacial features of the offspring of chronic alcoholic mothers can be found in babies with Noonan's phenotype.[16] Bianchine and Taylor have noted, however, that only 1 of their 32 patients with Noonan's syndrome had been subjected to maternal alcoholism.[17] They suggested that such phenotypic similarity or overlapping of clinical characteristics may be based on many factors, for example, chromosomal, genetic, or specific biochemical defects. Jones and Smith have reported that recognition of the fetal alcohol syndrome in infancy already has been confounded in clinical analysis by the trisomy-18 syndrome and Cornelia de Lange's syndrome.[4] Other syndromes, such as the Lenz syndrome, also include microcephaly and small palpebral fissures. The risks of improper advice prompted by errors in diagnosis mandate precise diagnosis. Many more studies are required to determine the nature of these syndromes with more certainty than is presently available.[18,19]

Precise monitoring of maternal alcoholism in maternity units and parental clinics will certainly aid in distinguishing these syndromes. Measurements of blood alcohol, urine alcohol, and osmolality could be useful laboratory aids. Since several instances of repeated production of infants with fetal alcohol syndrome have been recorded, recidivist maternal alcoholics can be distinguished. The fact that these mothers are older and more erratic than other mothers in health maintenance during pregnancy may be helpful in identification. Little (Johns Hopkins University) has developed programs for interviewing the alcoholic mother which have not yet attained widespread clinical use, but which will provide methods for comparing groups of alcoholic mothers.[20] The mothers involved in the fetal alcohol syndrome are all heavy users of alcohol with apparent daily ingestion of 120 cc or more of alcohol each day. The duration and quantity of beverage alcohol necessary for production of all or part of the features of the fetal alcohol syndrome are unknown. There is no accepted guide to maternal alcohol intake except to note that alcohol is a cellular toxin having demonstrable effect on gestation.[8]

A simple memory aid for some of the features of the syndrome is a series of "s" sounds: size, CNS, sleep, suck, and slits (palpebral). Physicians working in maternal care and nursery situations should be alert to the syndrome in hope that alcoholic mothers and their children may be recognized and treated.

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Dr. Corrigan, Department of Pathology, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78283.

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□ Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
□ Can relieve nausea and vomiting often associated with vertigo.*
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BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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See facing page for brief summary of prescribing information.

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ycin Tablets (erythromycin enteric-coated tablets) are spe-
ly coated to protect the contents from the inactivating effects
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istered either immediately after meals or when given be-
en meals on an empty stomach.

ications: *Streptococcus pyogenes (group A beta-hemolytic*
ptococci): Upper and lower respiratory-tract, skin, and soft-
ue infections of mild to moderate severity. Parenteral benza
ie penicillin G is considered by the American Heart Associa-
n to be the drug of choice in the treatment and prevention
streptococcal pharyngitis and in long-term prophylaxis of
umatic fever. When oral medication is necessary (because
parenteral route is contraindicated) or if there is known
rgy to penicillin, the following recommendations made by
American Heart Association apply: 1) Oral penicillin G or V
here no allergy exists)—This is the drug of choice. Give for
inimum of 10 days; 2) Erythromycin—Give for a minimum
10 days. A few strains of streptococci resistant to erythro-
cin have been reported.
ha-hemolytic streptococci (virdans group): Short-term pro-
laxis against bacterial endocarditis prior to dental or other
erative procedures in patients with a history of rheumatic
er or congenital heart disease who are hypersensitive to
nicillin. (Erythromycin is not suitable prior to genitourinary
gery where the organisms likely to lead to bacteremia are
m-negative bacilli or the enterococcus group of streptococci.)
phylococcus aureus: Acute infections of skin and soft tissue
mild to moderate severity. Resistance may develop during
atment.
ococcus pneumoniae: Upper respiratory-tract infections
g., otitis media, pharyngitis) and lower respiratory-tract in-
tions (e.g., pneumonia) of mild to moderate degree.
coplasma pneumoniae (Eaton agent, PPLO): In the treatment
primary atypical pneumonia, when due to this organism.
eponema pallidum: Infections due to this organism.
Corynebacterium diphtheriae and *Corynebacterium minutissi-*
mum: As an adjunct to antitoxin, to prevent establishment of
carriers, and to eradicate the organism in carriers. In the treat-
ment of erythrasma.
Entamoeba histolytica: In the treatment of intestinal amebiasis
only. Extra-enteric amebiasis requires treatment with other agents.
Listeria monocytogenes: Infections due to this organism.

Contraindication: Contraindicated in patients with known hyper-
sensitivity to erythromycin.

Warning: Safety for use in pregnancy has not been established.

Precautions: Erythromycin is principally excreted by the liver.
Caution should be exercised in administering the antibiotic to
patients with impaired hepatic function. Surgical procedures
should be performed when indicated.

Adverse reactions: The most frequent side effects of erythro-
mycin preparations are gastrointestinal, such as abdominal
cramping and discomfort, and are dose-related. Nausea, vomit-
ing, and diarrhea occur infrequently with usual oral doses.
During prolonged or repeated therapy, there is a possibility of
overgrowth of non-susceptible bacteria or fungi. If such infec-
tions occur, the drug should be discontinued and appropriate
therapy instituted. Mild allergic reactions such as urticaria and
other skin rashes have occurred. Serious allergic reactions, in-
cluding anaphylaxis, have been reported.

Treatment of overdosage: The drug is virtually nontoxic, though
some individuals may exhibit gastric intolerance to even thera-
peutic amounts. Allergic reactions associated with acute over-
dosage should be handled in the usual manner—that is, by the
administration of adrenalin, corticosteroids, and antihistamines
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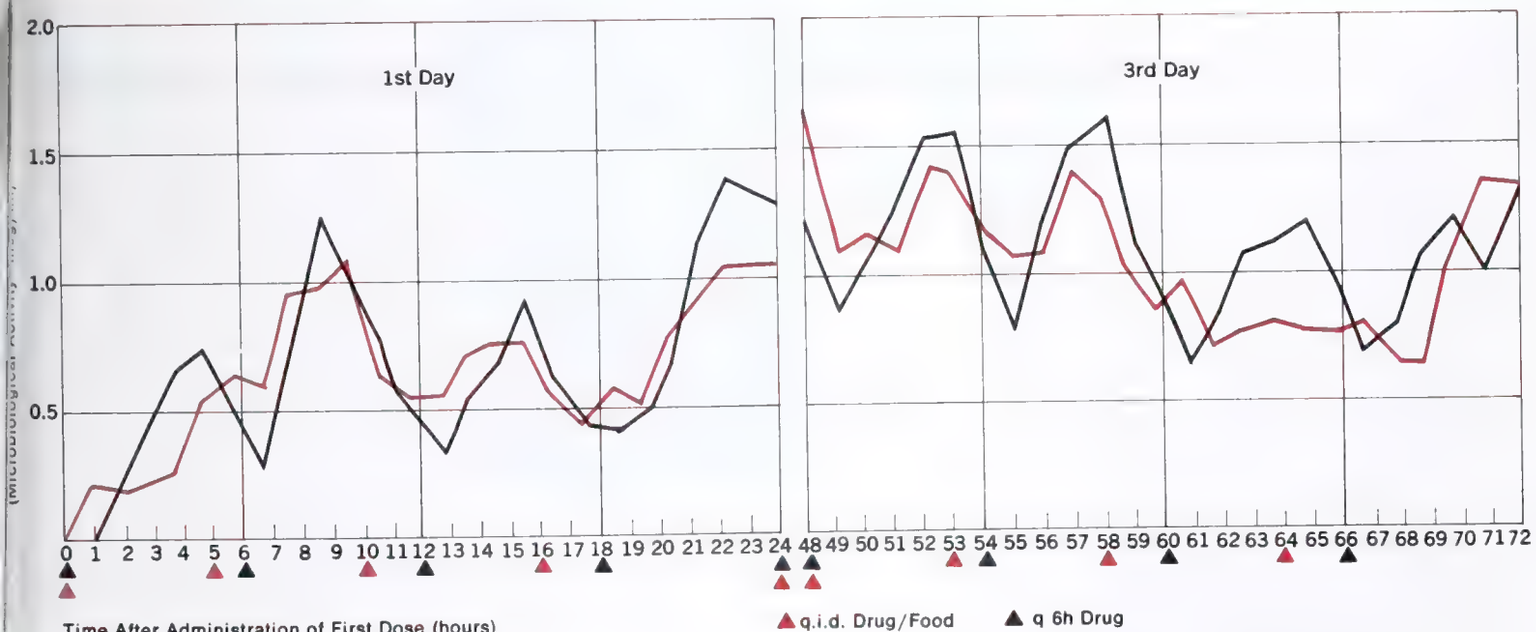
emonstrated bioequivalence of E-Mycin taken immediately after meals or between meals.



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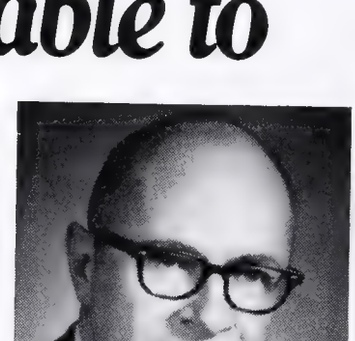
MED B-7-S

Opinion & Dialogue

Should a specially prepared package insert be made available to patients?

Dr. Alexander M. Schmidt
Commissioner,
Food and Drug
Administration



Dr. James H. Sammons
Executive Vice President
of the American
Medical Association

The idea of a so-called pa
package insert has been aroun
a long time. Many physicians a
use written instruction sheets t
provide patients with informati
about the drugs they are taking
some physicians give verbal ins
tions; but in too many instance
these are what I call eye-glazin
ercises. I have seen patients sit
glazed eyes listening to a rapid-
lecture by a hurried physician w
has 20 people out in his waiting
room. These patients aren't giv
sufficient understanding and th
fore do not follow instructions.
think the idea of an official pack
insert for patients is a good one
Perhaps we should really think
this kind of information simply
extension of drug labeling.

The benefits of patient involvem

Many physicians may not
ize how frequently a patient obt
his drug information from Aunt
Tillie or the next door neighbor.
this information is almost alwa
bad or irrelevant to the case at h
Furthermore, the incentive to g
along with a prescribed program
slim if the only reading matter t
patient receives, along with his
scription, is a bill.

As an educator I am impre
by the principle that the best wa
get someone to do something is
involve him in the process. So th

I think there are advantage
well as some real disadvantages
a patient package insert. When y
begin to use semi-medical or me
cal terms to describe complicati
or possible sequelae of disease o
treatment, you may frighten the
tient—particularly since the mor
highly sophisticated patient is no
the one who is going to read the i
sert. The patient who will read it
the one most susceptible to frigh
and confusion by the language.

On the positive side, a pack
insert will probably give the patie
better insight into why he is being
treated the way he is, and it may
give the physician a little bit more
time. But it does not remove from
the physician the need or obligati
to explain the insert.

Some pitfalls in the inclusion of side effects

Certainly a patient should be
warned of the possibility of seriou
side reactions—to know what the
real dangers are. But it doesn't do
bit of good to indicate that a patie
on oral penicillin may develop a
rash, itching, or a drop in blood
pressure. Or that he may faint. I
think the real danger is that fright
engendered by the insert may pos
sibly outweigh the potential good.

n purpose of drug information
ne patient is to get his coopera-
in following a drug regimen.

**aration and distribution of
ent drug information**

We would hope to amass infor-
ion from physicians, medical
eties, the pharmaceutical indus-
nd centers of medical learning.
ultimate responsibility for uni-
n labeling must, however, rest
the Food and Drug Administra-
. There is nothing wrong with
agency saying, "this informa-
is generally agreed upon and
efore it should be used," as long
ur process for getting the infor-
ion is sound.

Distribution of the information
problem. In great measure it
ld depend on the medication in
stion. For example, in the case
n injectable long-acting proges-
ne, we would think it mandatory
ssue two separate leaflets—a
rt one for the patient to read be-
getting the first shot and a long
to take home in order to make a
ision about continuing therapy.
his case, the information might
ut directly on the package and
removable at all. But for a medi-
ion like an antihistamine this
rmation might be issued sepa-
ly, thus giving the physician the
ion of distribution. This could
serve the placebo use, etc.

It is in the distribution of patient information that the pharmacist may get involved. As professionals and members of the health-care team and as a most important source of drug information to patients, pharmacists should be responsible for keeping medical and drug records on patients. It is also logical that they should distribute drug information to them.

Realistic problems must be considered

We have to expect that the introduction of an information device will also create new problems. First, how can we communicate complex and sophisticated information to people of widely divergent socioeconomic and ethnic groups? Second, what will we say? And third, how can we counteract the negative attitude of many physicians toward any outside influence or input? Hopefully the medical profession will respond by anticipating the problems and helping to solve them. Assuming we can also solve the difficulty of communicating information to diverse groups throughout the United States, our remaining task will be the inclusion of appropriate material.

What information is appropriate?

In my opinion, technical, chemical and such types of material should not be included. And there is no point in the routine listing of side effects like nausea and vomiting which seem to apply to practically all drugs, unless it is common with the drug. However, serious side effects should be listed, as should information about a medication that is potentially risky for other reasons.

Other pertinent information might consist of drug interactions, the need for laboratory follow-up, and special storage requirements. What we want to include is information that will help increase patient compliance with the therapy.

Positive aspects of patient drug information

Labeling medication for the patient would accomplish a number of good things: the patient could be on the lookout for possible serious side effects; his compliance would increase through greater understanding; the physician would be a better source of information since he would be freer to use his time more effectively; other members of the health-care team would benefit through patient understanding and cooperation; and, finally, the physician-patient relationship would probably be enhanced by the greater understanding on the part of the patient of what the physician is doing for him.

---

y the doctor can remove that fear
20 or 30 minutes of conversation.

I'm not suggesting that we
hhold any information from the
ient because, first of all, it would
totally dishonest and secondly, it
uld defeat the very purpose of the
ert. I do think that a patient on the
th control pill should know about
incidence of phlebothrombosis.

If you're going to tell a patient
incidence of serious adverse re-
ions, then you have to tell him
t a concerned medical decision
s made to use a particular medi-
tion in his situation after careful
nsideration of the incidence of
mplications or side effects.

**notionally unstable patients pose
pecial problem**

There are patients who, be-
use of severe emotional problems,
uld not handle the information
ntained in a patient package in-
rt. Yet if we are going to have a
ckage insert at all, we just can't
ve two inserts. I think we might
mply have to tell the families of
ese patients to remove the insert
om the package.

**egal implications of the patient
ackage insert**

Just what effect would a patient package insert have on malpractice? We could try to avoid any legal implications by pointing out that the physician has selected a particular medication because, in his professional judgment, it is the treatment of choice. For instance, you can't tell everyone taking antihistamines not to work just because a few patients develop extreme drowsiness which can lead to accidents. And what about the very small incidence of aplastic anemia rarely associated with chloramphenicol? If, based on sensitivity studies and other criteria, we decide to employ this particular antibiotic, we do so in full knowledge of this serious potential side effect. It's not a simple problem.

How do we handle an insert for medication used for a placebo effect?

With rare exceptions, physicians no longer use medications for a placebo effect. This question does raise the issue of how a patient may react to receiving a medication without a package insert.

Preparation of the package insert

The development of the insert ought to be a joint operation between physicians, the pharmaceutical industry, the A.M.A. and the F.D.A.

I view the A.M.A.'s role as a coordinator or catalyst. It is the only organization through which the profession as a whole, irrespective of specialty, can speak. It has relatively instant access to all the medical expertise in this country. And it can bring that professional expertise together to ensure a better package insert. The A.M.A. can work in conjunction with the industry that has produced the product and which is ultimately going to supply the insert.

I don't think we should rely, or expect to rely, on legislative committees and their nonprofessional staffs to make these decisions when it is perfectly within the power of the two groups to resolve the issues in the very best American tradition—without the government forcing us to do it. I think the F.D.A. has to be involved, but I'd like them to become involved because they were asked to become involved.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005

P·M·A

Sudden deafness

William L. Meyerhoff, MD

Sudden hearing loss is a medical if not a surgical emergency. A careful evaluation before beginning therapy is necessary to uncover etiologies which are potentially dangerous and treatable. Specific therapy should be aimed at any specific etiology uncovered during the evaluation, and nonspecific therapy should be utilized to increase cochlear blood flow, reduce intravascular coagulation, and reduce inflammation. Approximately 50% of the patients will recover some or all of their auditory function, while the remaining 50% will have no recovery at all.

Introduction

Prosper Meniere (1861) was probably the first to report a case of sudden hearing loss, and, although the subsequent literature is replete with case reports, speculations, and observations, the many prescribed treatments give evidence to the lack of understanding of the entity.[1] Sudden deafness is a perplexing problem for both the patient and the practitioner. The patient is faced not only with the sudden loss of one of his major sense organs, but the fear of a possible life-threatening cause such as cancer, brain tumor, or stroke. The practitioner, on the other hand, is faced with a diagnostic and therapeutic dilemma. As the etiology in most cases is speculative, should one do nothing (up to 50% of these patients will improve without therapy) or should one begin diagnostic and therapeutic management which is expensive and not without morbidity?

Clinical Manifestations

"The occurrence of sudden deafness, monaural or binaural, is not a rare clinical observation."[2] The incidence has been estimated to approach 1 in 5,000 people per year or more. Many patients have a recent history of an upper respiratory tract infection, emotional crisis, or sudden exertion. Men and women are equally affected, the average age being about 40 years. The hearing loss may develop suddenly associated with a subjective click or over a period of several hours. Tinnitis is the rule, occurring in at least 70% of the cases and often serving as an aura to the impending hearing loss.[3-6] Vertigo is an accompanying symptom in up to 50% of patients and may be the dominant symptom.[7-13]

Predisposing Factors and Etiologies

Patients with diabetes mellitus, arteriosclerotic vascular disease, hypertensive heart disease, hyperlipoproteinemia, anxiety, and allergic diatheses are more susceptible to sudden hearing loss than the average population. Although the exact association is not clear, it appears to be on a circulatory basis with narrowing of vessel lumens, anoxia, hypercoagulation, and sludging of blood.[4,7,12,14-16] The list of known and proposed etiologies is legion.

Viral Agents

Viral agents (mumps, rubella, influenza, mycoplasma, herpes zoster, adenovirus type III, infectious mononucleosis, and rubeola) are unequivocally implicated in sudden hearing loss and probably represent the single most important etiology.[4,8,9-11] The presumed mechanisms are (1) neuronitis or ganglionitis (actually a viral infiltration of the ganglion or nerve, especially seen with herpes infection), (2) endolymphatic labyrinthitis (actual invasion of the cochlear duct structures by the viruses of mumps, rubeola, rubella, or influenza virus or all of these), (3) peri-

lymph labyrinthitis (invasion of the perilymphatic space by a viral agent, especially seen in herpes zoster),[1,10,17] and (4) vascular occlusion (all viruses). The virus attacks the vessel wall causing endothelial damage and edema. It also causes platelet and red blood cell disruption resulting in vasoconstriction, platelet agglutination and hypercoagulation.[17] The diagnosis of viral disease may be made by examining blood, stool, and cerebral spinal fluid for evidence of viral infection (antigens, antibody titers, and complement fixation). A history of mumps parotitis does not rule out the possibility of a subsequent mumps viremia.[4,9,18]

Trauma

Aside from the obvious hearing loss associated with temporal bone fractures and concussion, sudden hearing loss may also be caused by implosive and explosive pressure changes on the inner ear. These pressure changes may be mediated by alterations in cerebral spinal fluid pressure (via the cochlear aquaduct or internal auditory canal) or by changes in middle ear pressure. They may be secondary to exertion, environmental pressure changes (diving and flying), or coughing and sneezing. Pathological changes are probably limited to disruption of the round window or oval window annulus and subsequent perilymph leak.[9,16,19-24]

Bacterial

Sudden hearing loss occurs with bacterial labyrinthitis which may be secondary to meningitis, suppurative otitis media, or blood-borne infection from a distant focus. The pathological process usually begins in the perilymph but soon spreads to the endolymph and causes total destruction of the membranous labyrinth. Vertigo is usually severe.[4,6,9,10,16]

Toxic

There are many chemical agents known to be toxic to the labyrinth. Some are ubiquitous (alcohol, tobacco, and carbon monoxide) while some are in the form of heavy metals (lead, mercury, and gold). Others represent part of our pharmacological armamentarium against disease. Perhaps the most common offenders are the aminoglycoside antibiotics (gentamicin, neomycin, vancomycin, streptomycin, and kanamycin). The hearing loss is not reversible and is preceded by vestibular depression in the case of streptomycin and gentamicin. Renal function impairment may lead to elevated blood levels of the antibiotic and increased incidence of ototoxicity. The pathological lesion is mainly in the hair cells and stria vascularis of the cochlear duct. Aspirin, furosemide, and ethacrynic acid are also associated with hearing loss. In the case of aspirin, the hearing loss is always reversible; with furosemide and ethacrynic acid toxicity, it may be permanent.[4,6,7,9,10,25,26]

Tumors

As many as 15% of cerebellopontine angle tumors present with sudden hearing loss. The neoplastic growth interrupts the blood supply to the inner ear by pressure on the internal auditory artery. This results in a sudden loss of hearing and a cochlear audiological picture.[9,16,26]

Syphilis

Both congenital and acquired syphilis may cause sudden hearing loss. Luetic

involvement of the temporal bone manifests as labyrinthitis, mononuclear leukocytic infiltrate, and obliterative endarteritis. Endolymphatic hydrops has also been described. [2,6,9,10,26,29]

Miscellaneous

Sudden deafness has been reported with most causes of endolymphatic hydrops (Cogan's syndrome, Meniere's syndrome, and allergy). Sudden deafness has also been associated with systemic lupus erythematosus, leukemia, and Paget's disease.[5,6,10,28,29]

Evaluation

In order to avoid overlooking a potentially dangerous or treatable underlying etiology it is essential to carefully evaluate patients with sudden hearing loss before treatment is begun.

An audiogram will quantitate the degree of loss as well as help localize the site of lesion. An electronystagmogram documents associated vestibular injury, and internal auditory canal x-rays aid in the diagnosis of acoustic neurinoma or other cerebellopontine angle neoplasms. Hematological studies for syphilis (FTA-abs), hypothyroidism (T_3, T_4), diabetes mellitus (five-hour glucose tolerance test), hypercoagulable state (prothrombin consumption time), and hyperlipoproteinemias (lipid fractionation) complete the diagnostic work-up. Viral studies on blood, stool, and cerebral spinal fluid are expensive, difficult to obtain, and alter therapy very little.[1,5,13,17]

Treatment

Where a specific etiology has been elucidated, therapy is directed toward its eradication. A history of associated exertion, diving, or flying would suggest an oval or round window leak and an exploratory tympanotomy would be indicated. Where no etiology is apparent, treatment should include hospitalization and bed rest, heparin 10,000 units by subcutaneous injection daily for one week for its anti-inflammatory, anticoagulant, and lipolytic properties; and ACTH, 40 units by intramuscular injection daily for one week to decrease platelet adhesiveness and inflammation. Low molecular weight of dextran (10%), 500 cc over a four-hour period, repeated every 12 hours for one week, prevents sludging of blood and rouleau formation. Histamine, 2.75 cc in 250 cc of 5% dextrose and water for two hours administered intravenously every six hours for three days, helps achieve vasodilatation and increased cochlear blood flow.[4,5,9,11,13,15,16]

Prognosis

Although reports differ from investigator to investigator, it is generally felt that 25 to 30% of the patients with sudden hearing loss will have complete auditory recovery, 25 to 30% of the patients will have partial recovery, and the remainder will have no recovery. The earlier in the course of the disease that therapy is begun, the better the prognosis.[6,9,10,30]

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Dr. Meyerhoff, Chief of Otorhinolaryngology, Veterans Administration Hospital, Assistant Professor of Surgery, University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284.

Chronic peritoneal dialysis in children

Twelve children with chronic renal failure maintained on either home or hospital-based peritoneal dialysis are discussed. A modified Tenckhoff catheter was used in all patients, totaling 854 dialyses during 91.5 months. Among the medical problems encountered, peritonitis remains the leading source of morbidity and mortality. However, this complication should decrease with use of the larger, closed delivery systems, meticulous attention to sterile technique, and wider use of home dialysis. Half of our patients have been maintained on home peritoneal dialysis. For many patients, this form of dialysis allows greater freedom of activities than hemodialysis. Peritoneal dialysis offers a safe, simple, and versatile alternative to hemodialysis as a modality for treating chronic renal failure.

Chronic renal failure which is no longer amenable to conservative medical management has been treated by hemodialysis, peritoneal dialysis, and transplantation. The enthusiasm with which hemodialysis, with its greater efficiency and speed, was greeted, relegated chronic peritoneal dialysis to a secondary position in the treatment of chronic renal failure until a recent report[1] put these modalities into perspective. The availability of permanent indwelling Silastic catheters[2] and the introduction of automatic cyclers[3] have not only made peritoneal dialysis the preferred form of therapy in many instances, but have allowed some patients, who would otherwise need to remain hospitalized, to return home on a home treatment program. This is especially true in the pediatric patient, for whom widespread facilities for hemodialysis do not exist and for whom parental fear of hemodialysis is often an insurmountable problem.

While facilities exist at The University of Texas Medical Branch for center-based chronic hemodialysis of outpatient children, home peritoneal dialysis is encouraged whenever it seems to be the therapeutic modality offering the greatest chance for maximal patient rehabilitation.

The following report outlines our experiences with both hospital-based and home peritoneal dialysis during the past six years.

Methods

A modified Tenckhoff catheter, consisting of a straight Silastic tube with a single Dacron cuff attached 24 cm from the end of the tubing, was used in all patients. The intraperitoneal section, 20 cm long with numerous perforations in the distal 10 cm, was surgically inserted under direct vision into the peritoneal cavity. Immediately after implantation, dialysis was initiated, with heparin added to the dialysate to insure catheter patency. Leakage occasionally occurred around the catheter but usually stopped spontaneously within 24 to 48 hours. The length and number of dialyses per week for each patient was such as to obtain adequate biochemical control (blood urea nitrogen in the range of 30 to 50 mg/100 ml after dialysis) and restore a sense of well-being. During this time, in appropriate situations, the parents were instructed in the technique, both manual and automatic,* of peritoneal dialysis: the aseptic preparation and modification of the dialysate, the measurement of inflow and outflow, and the procedure and importance

*Automatic Peritoneal Cycler by American Medical Products Corporation, Fairfield, NJ.

Ben H. Brouhard, MD
Michael Berger, MD
Luther B. Travis, MD
Robert J. Cunningham, III, MD
Hugo F. Carvajal, MD

of obtaining peritoneal fluid cultures. Samples, taken at the start and end of each dialysis, were cultured with the Testuria Kit.† In addition, these parents were taught to take blood pressure and administer intramuscular medication. As the parents gained confidence in performing the dialysis, nursing and physician supervision gradually diminished until the procedure was performed entirely by the parents. When this point had been achieved, the patient was allowed home for dialysis.

The diagnosis of peritonitis was suspected by the presence of cloudy fluid, abdominal pain, and fever, and was confirmed by culture. When present, it was treated with continual peritoneal lavage using antibiotics (oxacillin and gentamicin until sensitivities were known) and heparin in the dialysate. Antibiotics were also given parenterally for two to three weeks. If peritoneal infection resulted in catheter malfunction, the permanent catheter was removed; a temporary catheter was then inserted until the infection was eradicated, at which time it was removed and another permanent catheter reinserted.

Results

Dialysis Time and Catheter Survival

Twelve patients have been maintained on chronic peritoneal dialysis during the past six years. Seven of the 12 were discharged to be dialyzed at home or at their local community hospital. Total time of dialysis has ranged from 2 to 18 months; home dialysis time has varied from 2 to 18 months. Total dialysis experience has consisted of 854 dialyses over 91.5 months, with catheter survival time varying from a few days to seven months with an average of 2.9 months (Fig 1). This value is skewed by the difficulties involved in maintaining a functioning catheter in patient YP. If patient YP is excluded, catheter survival time ranges from three to seven months with an average of 3.6 months.

Growth

Satisfactory growth can be maintained in patients on peritoneal dialysis. A representative example is presented in Fig 2. Nine of our 12 patients have continued on their predialysis growth percentiles; however, 3 adolescent patients have not grown. One of these (AM) was 16 years old at the initiation of dialysis and therefore could not be expected to grow significantly.

Medical Complications

Biochemical control of uremia has been similar to that reported by others,[1,4] with predialysis values of blood urea nitrogen ranging from 60 to 90 mg/100 ml and postdialysis values from 30 to 40 mg/100 ml. Electrolytes have remained in the normal range except for two patients (DR and KO) who have required chronic, supplementary therapy with an exchange resin for hyperkalemia.

All patients, as expected, have remained anemic (hematocrit values ranging from 11-21%), but only one patient, who is surgically anephric, has required frequent transfusions.

In the one patient (AM) in whom it was measured, protein loss totaled 91.7 gm protein per 12 liter dialysis. This patient remained anorectic during hospital-based peritoneal dialysis. Because of his de-

†Ayerst Laboratory, Inc., New York, NY.

creased caloric intake he became symptomatic from hypoproteinemia, developing pleural effusions and edema. After being on home peritoneal dialysis for one month and undergoing a consequent psychological uplift, this patient accepted his diet to a greater extent and his serum protein levels increased to normal.

Hypertension has been controlled in most patients in this series with adequate dialysis, diet, and medication. Patient JR, who had hyper-renninemia, required bilateral nephrectomy for adequate blood pressure control.

All patients have shown some evidence of renal osteodystrophy. None have had bone pain or required parathyroidectomy; all have received phosphate binders, supplemental calcium, and vitamin D.

Infection

Pericatheter abscess has occurred twice; both times the causative organism was *Staphylococcus aureus*. In one instance this may have led to peritonitis. *Staphylococcus aureus* was the most frequent (13/21) cause of peritonitis in this series; other organisms have included *Moraxella (Mima)*,[2] an unidentified gram-negative rod,[1] *Proteus*, alpha streptococcus,[1] and *Candida albicans*.[1] Seven percent of the cultures taken (two per dialysis)

1. Months of dialysis.

Patient	Age	Sex	Diagnosis	Local	Hospital	No. of Dialyses	No. of Catheters	Episodes of Peritonitis
DB	11	F	Chronic pyelonephritis	5	2	80	2	3
DR	12	F	Chronic pyelonephritis	7	4	79	6	5
JR	7	M	Rapidly progressive glomerulonephritis	–	13	132	2	3
YP	8	F	Dysplastic kidneys	–	9	72	9	2
AM	16	M	Alport's syndrome	3.5	8.5	121	3	3
JG	7	M	Congenital nephrosis	–	2	29	1	0
KO	4	F	Focal sclerosing glomerulonephritis	3	2	48	4	2
AM	17	M	Obstructive uropathy	18		137	1	2
DW	12	M	Rapidly progressive glomerulonephritis	–	4	68	1	1
SM	14	M	Obstructive uropathy	–	4	12	1	1
GM	13	M	Obstructive uropathy	2	1	36	1	0
SE	13	M	Focal sclerosing glomerulonephritis	2	1.5	40	1	0
			Total	13.5	67.0	854	32	22

Peritonitis = 22/854 = 2.5%

Catheters = 91.5/32 = 2.9 months/catheter
82.5/23 = 3.6 months/catheter (YP deleted)

have been positive but not associated with signs or symptoms of infection.

Obstruction

Obstruction of dialysate flow can be caused by peritonitis, omental wrap or herniation, and fibrin plugging of the catheter fenestrations. The need for catheter replacements in our series was largely caused by peritonitis except in YP, who had recurrent episodes of what was felt to be ball-valve omental obstruction of her catheter.

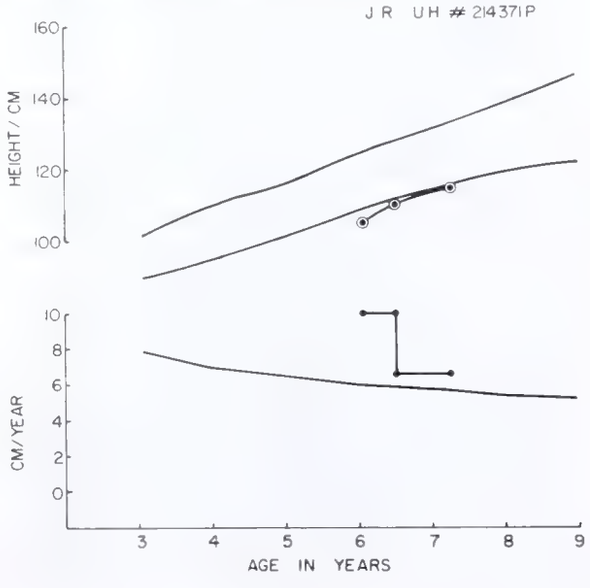
Discussion

Peritoneal dialysis has been used with great efficiency and simplicity since its conception in 1923.[5] However, the rapid developments in hemodialysis relegated peritoneal dialysis to acute treatment in most institutions. Simplicity could not outweigh the greater efficiency, shorter dialysis time, and painlessness of hemodialysis; in addition, the high incidence of peritonitis made peritoneal dialysis less appealing. Major advances in the peritoneal procedure occurred with the introduction of the multiple puncture technique[2,3] and the Silastic catheter.[6,7] In 1968 Tenckhoff and Schechter[2] described their experience with a permanent indwelling Silastic catheter fitted with Dacron cuffs placed subcutaneously and outside the peritoneum. This catheter offered the advantages of Silastic, reduced the incidence of tunnel abscesses, and eliminated the trauma associated with multiple punctures.

Protein loss may be a significant problem as intake may not be sufficient to make up for the losses into the dialysis fluid. Linder,[8] in studying nitrogen balance in six patients on dialysis for six months or longer, showed that nitrogen intake (11.69 gm nitrogen per day and a 1 gm/kg body weight protein diet) was often less than the average loss (11 to 19 gm nitrogen) on dialysis days. However, the improved appetite resulting from reversal of uremia often allows for more than adequate protein intake on nondialysis days.

Not only may positive nitrogen balance be maintained, but children on peritoneal dialysis may grow.[4] Nine of our 12 patients have maintained their predialysis growth percentiles while on dialysis. Two (AM and DR) adolescent patients have not grown; in the case of patient AM this may reflect his decreased protein intake. Although the increased protein intake necessary for growth may contribute to higher levels of BUN, it is the dialytic treatment that has been responsible for the return of these patients' appetites. Any resultant biochemical abnormalities have been well controlled with peritoneal dialysis and pre-

2. Growth and growth velocity charts[14] of JR after starting peritoneal dialysis.



dialysis levels of BUN of 80 to 100 mg/100 ml may be disregarded[2] as long as the patient remains clinically well.

Peritonitis, even with improved catheters, remains the major complication of peritoneal dialysis. The incidence of 2.7% in this series is somewhat higher than others reported elsewhere.[9,11] Two reasons for this higher incidence may be the lack of a large closed delivery system[2] and the use of an open ward for peritoneal dialysis rather than a separate dialysis unit.[10] These defects have recently been corrected with the opening of a new dialysis facility specifically designed to perform both peritoneal and hemodialysis in children utilizing isolation rooms, a closed delivery system, and especially designed filters to trap bacteria.

Recurrent episodes of peritonitis with the same organism is an indication for catheter removal as it is the likely source of repeated infection. When separate episodes of peritonitis occur in the presence of a functioning catheter, intraperitoneal antibiotic lavage may be employed.[1,9] The addition of heparin reduces the incidence of catheter clotting. McKenna and associates [12] reduced the mortality by 49% and morbidity by 50% in 25 patients with severe peritonitis by this method.

Catheter plugging can occur in the absence of infection. This may be due to omentum wrapping around the catheter[9] or herniating through the side holes of the catheter.[11] This type of herniation occurred in patient YP, who experienced numerous episodes of ball-valve obstruction not associated with infection. When decreased flow has resulted from fibrin, streptokinase has been used with variable success.[11] Catheter life in this series ranged from three to seven months, with an average of 3.6 months. Tenckhoff[5] has reported survival ranging from 7 to 28 months. The average catheter life in his pediatric patients is 7.16 months.

Six of our patients have been maintained on home peritoneal dialysis. A prerequisite for successful home dialysis is a stable and supportive home. Three patients have been dialyzed twice a week and three, three times a week. Most have been instructed in the use of an automatic cycler, although some still prefer to change bottles individually because of greater freedom during family vacations. Rae and Pendray[13] have reported similar experiences with home peritoneal dialysis patients who were dialyzed in cabins, trailers, and motels and enjoyed swimming, fishing, boating, and horseback riding. The versatility, simplicity, and safety of peritoneal dialysis make this an ideal method of dialysis for such patients as dialysis can be performed at night while the patient and family sleep.

Home peritoneal dialysis is ideally suited for use in uremic children in Texas. To date, pediatric dialysis facilities for children are far below what is needed to provide optimal care for these patients. Existing facilities are often too distant to allow for outpatient dialysis. Since the techniques of hemodialysis are more difficult to master and provide great anxiety in the parents of some children, peritoneal dialysis offers an ideal alternative to this form of treatment. Its complications are less life threatening, its technique easier to master. With the use of an automatic cycler, the dialysis can be performed at night allowing normal daytime activities. We feel that peritoneal dialysis is an acceptable alternative to hemodialysis; home peritoneal dialysis is particularly desirable, while the ultimate goal for these children is transplantation.

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The authors, Department of Pediatrics, Division of Nephrology, The University of Texas Medical Branch, Galveston, Texas 77550.

Reprint requests to Dr. Brouhard.

Fiberoptic colonoscopy

John H. Smith, MD; Gomer W. Roberts, MD; Arthur H. Ohan, MD

Fiberoptic colonoscopy and its diagnostic and therapeutic capabilities are reviewed. A discussion of technique and technical aids is presented. Complications are rare; these are listed. Economic advantage of colonoscopic polypectomy is discussed.

Introduction

The development of flexible fiberoptic endoscopes has added a new dimension to the diagnosis and treatment of colonic disorders. With these instruments the entire colon, and even occasionally the terminal ileum, is accessible to direct visual examination.

Excellent articles reviewing extensive experiences in colonoscopy have been published.[1-3]

Colonoscopes ranging in length from 110 cm to 186 cm with controlled, four-direction maneuverability of the distal end are avilable. Light is provided by fiber glass bundles from an external cold light source, and a visual image is transmitted via a coherent bundle in which the multiple fibers are in precisely the same arrangement at the tip of the instrument and at the eyepiece. There are channels for insufflation of water and air to cleanse the lens and to distend the bowel as necessary to adequately examine the mucosa. One or two channels are provided for the passage of various instruments, including irrigating catheter, cytology brush, biopsy forceps, electrocoagulating tip or resecting snare, and grasping forceps. A teaching head attachment is available to enable simultaneous observation by a second examiner (Figs 1, 2).

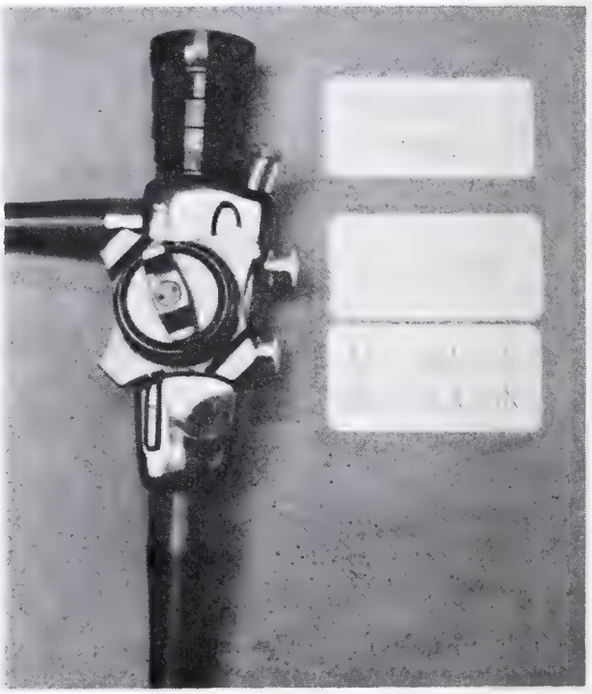
Indications

General

Colonoscopy should be performed in patients in whom barium enema examination

1. Shown is a 186-cm fiberoptic colonoscope with portable light source.

2. Control head of colonoscope.



and standard proctosigmoidoscopy fail to make an unequivocal diagnosis. Certainly this is true in the patient with bleeding or other symptoms of colonic disease, but also in patients who are asymptomatic but who undergo studies because of high potential for colonic disease, such as previously resected neoplasm of the colon or ulcerative colitis.

Neoplasm

Perhaps the greatest single indication for colonoscopy is the presence of a single polyp or multiple polyps on barium enema examination or proctosigmoidoscopy. The multiple incidence and total colon distribution of polyps is well recognized, and the colonoscope is an extremely valuable tool for investigation and treatment of these.

A tissue diagnosis of carcinoma may be obtained at colonoscopy, but resection remains the primary treatment. Endoscopy is most valuable, however, in helping diagnose the small, early lesion which may not be apparent on barium enema examination. Colon carcinoma is one of this country's most common neoplasms, and opportunity for cure should be increased with earlier diagnosis.

The colonoscopic finding of a polyp or carcinoma unseen during barium enema examination is not rare, and makes this type of study a valuable adjunct to routine x-ray examinations.

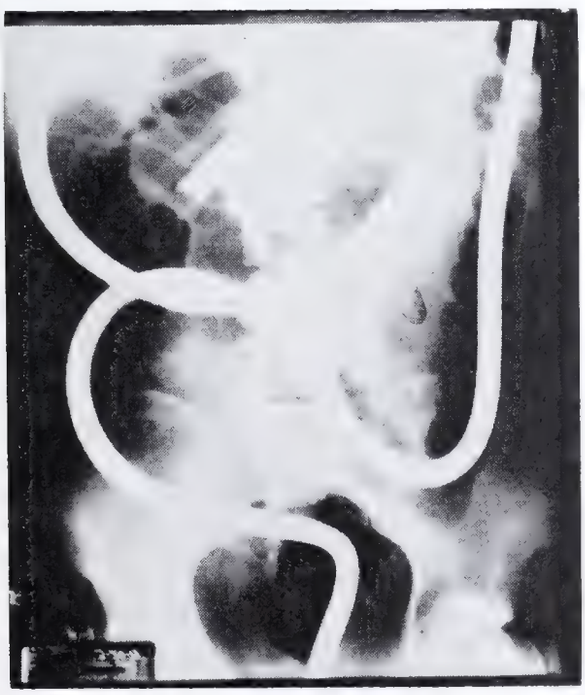
Inflammatory Diseases

Direct observation of mucosal changes is helpful in differentiation of inflammatory diseases, but greater care must be taken to avoid perforation of the colon in these cases. Endoscopy also may help follow the progress of therapy in ulcerative colitis.

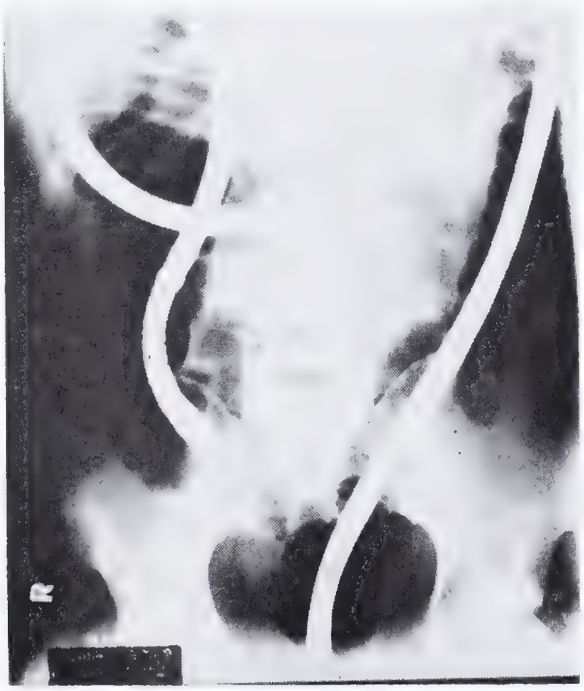
Intraoperative Colonoscopy

The need occasionally arises to visualize all or part of the colonic lumen during lap-

3. Scope inserted to hepatic flexure with large loop in sigmoid colon; smaller loop in transverse colon.



4. Same patient as in Fig 3. External manipulation and the hook and withdraw maneuver straighten the sigmoid and allow the scope to advance to the cecum.



5. Insertion of scope into rectum. (Fig 5-11, serial x-rays)

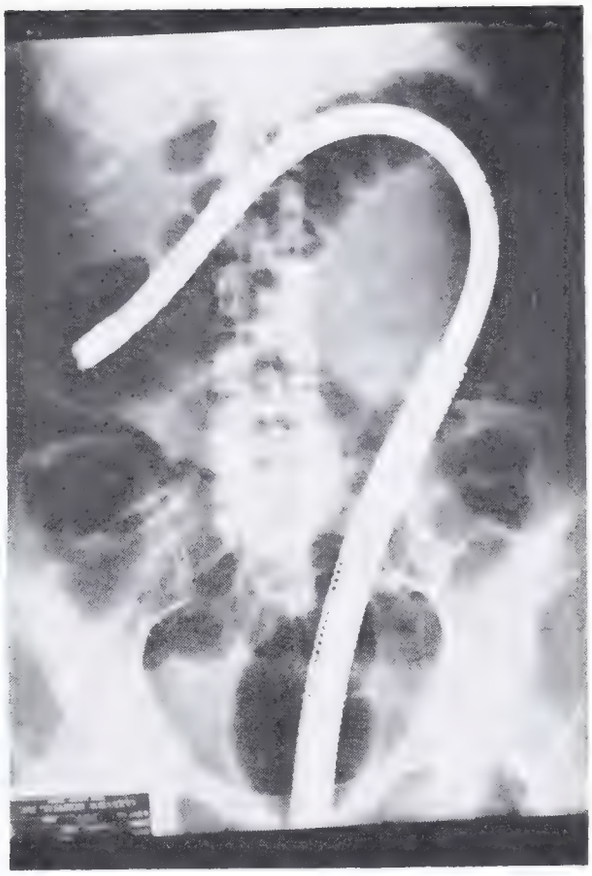
6. Scope advanced to sigmoid.

7. Scope advanced to splenic flexure; tip hooked.

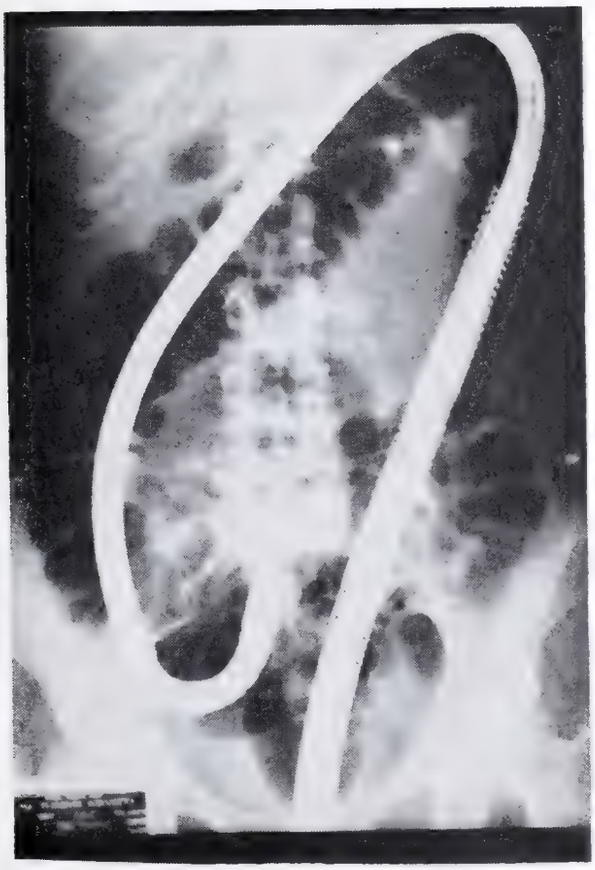
8. Scope withdrawn with straightening of sigmoid.

9. External sheath advanced over scope to maintain straightening of sigmoid; hook released from tip of scope.

10. Scope advanced to hepatic flexure.



11. Scope advanced to cecum.



arotomy. Colotomy, single or multiple, and coloscopy with a rigid scope significantly increase the risk of contamination of the peritoneal cavity. In such cases the fiberoptic colonoscope can be inserted through the rectum, its passage throughout the colon aided by the abdominal operator, and the colon examined without colotomy.

Foreign Body

Most intracolonic foreign bodies will pass per rectum; however, occasionally the shape or configuration of a foreign body may prevent its passage, and yet allow endoscopic removal with grasping forceps.

Preparation

Excellent mechanical cleansing of the bowel is essential for colonoscopy, especially if the entire colon is to be examined. A clear liquid diet for two days prior to examination, laxatives (orally), and cleansing enemas daily allow good visualization of the colon. We routinely give Phenergan, 25 mg intramuscularly, two hours before examination, and atropine, 0.6 mg, with a narcotic one hour before examination. If additonal sedation is desired, Valium in doses of 5-30 mg is given intravenously at the time of examination. If excessive peristalsis of the bowel interferes with the examination, intravenously administered anticholinergic drugs may help.

Technique

We perform colonoscopy in the x-ray suite and utilize fluoroscopy on almost all examinations. Radiation will damage the fiber glass bundles, gradually producing a yellowing effect, and every effort must be made to minimize its use. However, it is an invaluable aid in the passage of the scope, especially in difficult areas of the colon.

The patient is placed in the left lateral or supine position on the x-ray table. The colonscope is inserted with gentle, intermittent forward pressure in a to-and-fro fashion, aided by occasional axial rotation of instrument and maneuvering of the tip of the scope. The difficult areas of colon to pass are the sigmoid curve, the splenic and hepatic flexures, and, to some extent, the transverse colon. The sigmoid and transverse portions of the colon are mobile, while the descending and ascending colon segments are usually straighter and fixed in a retroperitoneal position which allows easy progress of the scope.

Aids to Insertion

External or Internal Manipulation

When difficulty is encountered in advancing the scope, manipulation of the involved area of the colon through the abdominal wall may help in straightening the loop so the instrument may progress.

The tip of the scope may be maximally deflected, "hooking" the bowel wall, and the scope then gently withdrawn, with straightening and shortening of the bowel then allowing further insertion (Figs 3, 4).

Internal wire stiffeners, passed through the biopsy channel, may assist in straightening a long, troublesome colonic loop to allow forward progress.

External Sheath

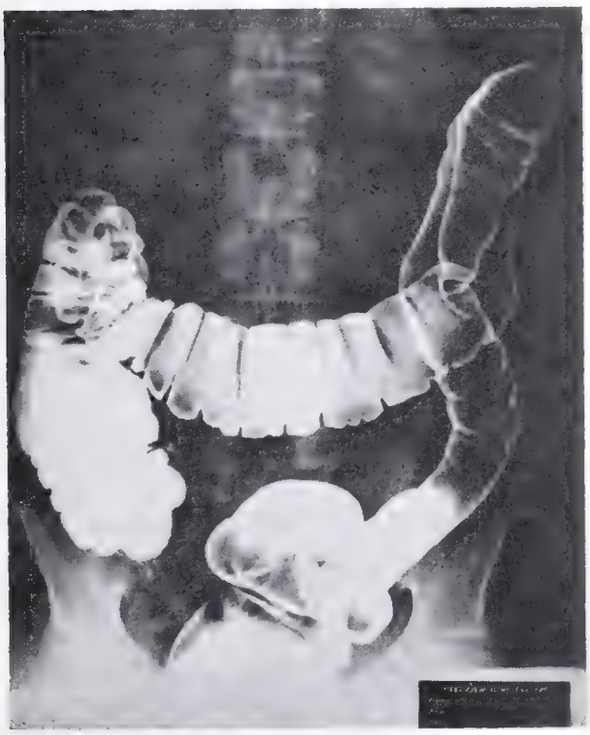
A firm plastic sheath, in place over the colonoscope prior to insertion, may be advanced over the colonoscope after the scope has reached the area of splenic flexure to maintain the relatively straight po-

sition of the sigmoid loop, allowing external force to be effectively applied to advancing the tip rather than bowing the sigmoid loop again[4] (Figs 5-11).

Oral-Anal Guidestring

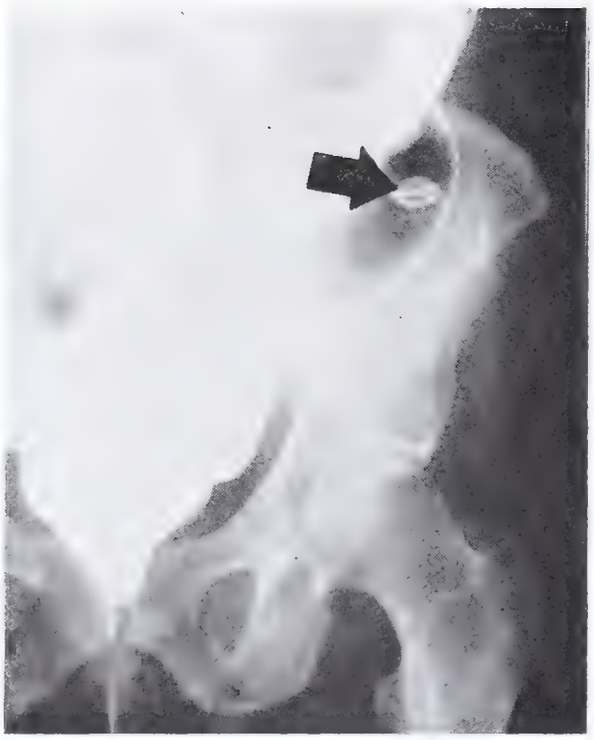
A fine, braided guidestring with a small, weighted balloon at its tip may be swallowed and the string allowed to pass through the entire gastrointestinal tract. The string is then drawn through the biopsy channel of the colonoscope and gentle traction applied to it, using it as a guideline during the examination. This technique has significantly decreased the time required and discomfort to the patient during colonoscopy. The presence of the string in the biopsy channel has not interfered with biopsy, snare polypectomy, or passage of other instruments. It is of great value in the patient with multiple

12. Normal air contrast barium enema on a volunteer subject. Note the fairly typical configuration of the sigmoid and the position of the splenic flexure.



13. Same patient as in Fig 12. An opaque oral-anal guideline in place. Arrows show its course through the colon. The configuration of the colon is unchanged compared to Fig 12.

14. Same patient as in Figs 12, 13. Traction on the anal end of the guideline shortening and straightening the colon.



15. Barium enema showing polyp in the proximal sigmoid colon.

16. Endoscopic view of polyp.

polyps where repeated reinsertion of the scope is necessary (Figs 12-14).

Diagnostic and Therapeutic Capabilities

The colonoscope may be used to obtain specimens for culture or brush cytology in specific areas throughout the colon. Biopsies of suspected lesions may be obtained with small forceps. Pedunculated polyps may be excised with the electrocautery snare, recovered with grasping forceps, and removed (Figs 15-18). Smaller sessile polyps can be biopsied and electrocoagulated; larger sessile polyps should be biopsied but generally require surgical removal.

Complications

Fortunately, complications of colonoscopy and polypectomy are uncommon, as demonstrated by large series, and serious problems are rare indeed.[1,6]

Bleeding

Early bleeding shortly after colonoscopic polypectomy, or delayed by several days, is uncommon, and is rarely of sufficient magnitude to require blood replacement.

Perforation

Perforation of the colon during colonoscopy, with or without polypectomy, has been reported. Minimally symptomatic perforations have been managed successfully without surgery; more extensive perforations have required operation.[1]
Large series of colonoscopies have indicated that serious complications are rare, especially compared with surgical risks involved in alternative approaches.

Explosion

Explosion of colonic gases is a potential complication of electrosurgical polypectomy which may be avoided by adequate mechanical cleansing of the bowel prior to examination and by insufflation of carbon dioxide gas during the examination.

Economics

Several reports have confirmed the great savings in cost of colonoscopic polypectomy over laparotomy, colotomy, and polypectomy.[1,5] We have done all colonoscopic polypectomies in the hospital, but the patients are prepared while at home, admitted to the hospital the day of examination or the night before, then usually dismissed the morning after the procedure. This is in contrast to the hospital stay of a week or longer for the patient who undergoes laparotomy and polypectomy. In addition, there is the definite decrease in risk and discomfort to the patient who has a polyp removed via the colonoscope.

17. Snare loop around stalk of polyp. An intraluminal guidestring is seen to the right of the snare.

18. Resected specimen.

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Drs. Smith and Ohan, 4100 Frawley Drive, Fort Worth, Texas 76118. Dr. Roberts, 7501 Glenview Drive, Fort Worth, Texas 76118.

Treatment of large villous tumors of the lower rectum by multiple-stage fulguration

Patrick H. Hanley, MD

Villous tumors of the colon and rectum possess great potentiality for becoming malignant. Because of the high incidence of malignancy, some surgeons and pathologists believe that villous tumors of the lower rectum should be treated by a radical cancer operation.

In 22 years, 401 cases of villous tumors of the colon and rectum were treated at the Ochsner Clinic. In 54 cases the lesions were 3 to 12 cm in size and located in the lower two-thirds of the rectum. These tumors were diagnosed as benign by the criteria stated in this article. They were treated by stage fulguration at intervals of five to seven days until the entire lesion was destroyed. One patient required 14 treatments. There has been no recurrence or subsequent development of cancer among patients in this study.

Age and Sex

Villous tumor is most frequently found in the sixth and seventh decade of life; the greatest incidence is in patients between 60 and 69 years of age. Villous tumors are encountered in both sexes with about the same frequency.

Multiple Lesions

The villous tumor is often referred to as a large solitary lesion; however, in our experience more than 2.5% of patients had multiple lesions. One patient had four separate lesions, one in the descending colon, two in the left colon, and one in the rectum. Associated lesions also must be considered. In our last published series of 217 patients,[1] five had separate malignant neoplasms, three adenocarcinoma, one carcinoid, and one epidermoid carcinoma.

Size

Villous tumors are frequently thought to be large lesions; however, in our series, 59 patients had lesions of 4 to 16 cm, and 158 patients had lesions less than 4 cm in size.Some large lesions may circumferentially involve the entire rectal mucosal surface. Because villous tumors are of superficial mucosal origin, they are most frequently sessile. However, approximately one-third of villous tumors are pedunculated.

Location

Villous tumors are most frequently located in the rectum and lower sigmoid and in the remaining colon with diminishing incidence.

Symptoms

The classical symptom of large villous tumors is frequency of bowel movements containing large quantities of clear mucus. Carey and Burbank[2] reported a patient who passed 3,000 cc of clear mucus. The content of chloride and sodium in the mucus secreted by villous tumors is approximately that found in the serum. The potassium content may be as high as 80 mEq/liter compared to the 4 to 5 mEq/liter in the serum. The loss of large quantities of mucus results in severe electrolyte imbalance. More than one-third of our patients with villous tumors were asymptomatic, the tumor being found incidentally during routine proctosigmoidoscopy. Although 95 of our patients passed small amounts of blood per rectum, it was usually attributable to hemorrhoids or anal fissure, for villous tumors rarely bleed.

Clinical Evaluation

Large, sessile, villous tumors in the lower rectum may not be detected on digital examination because of their soft consistency. During exploratory laparotomy it is difficult at times for the surgeon to feel a sessile villous tumor by palpating the colon between the fingers. Low-lying rectal lesions may prolapse through the anus during defecation, and may be erroneously diagnosed as internal hemorrhoids.

During proctoscopy the larger classical sessile lesions are readily diagnosed. The center of the lesion is usually thick with finger-like fronds suspended in the clear mucus being secreted by the neoplastic cells. The lesion, thicker near the center, gradually becomes thin towards the periphery so that the exact junction of normal mucosa with the villous tumor is not detectable. In the smaller pedunculated tumors, the fronds are so short and close together that the surface appears smooth and they may be mistaken for adenomatous polyps. The experienced proctologist can recognize small pedunculated villous tumors by their color and smooth, wet-appearing surface. The color of villous tumors and normal mucosa is similar, in contrast to the maroon color of an adenomatous polyp.

A lesion in the lower 8 cm of the rectum can usually be adequately evaluated by digital palpation. Rectal digital palpation is the most reliable means of determining the benignity of villous tumor in the lower rectum. A small cancer in a large villous tumor is difficult to visualize by proctoscopy because it is deep and is hidden by the villous fronds. It can be felt as an isolated small area of induration, and biopsy of this area usually is positive for cancer. Random multiple biopsy examinations are not reliable. The pathologist should never be expected to make a final histologic diagnosis from biopsies.

Of 217 patients, 204 were diagnosed by proctoscopy. Of these 204, 70 were also palpated. Thirteen were diagnosed by barium enema examination above the proctoscopic level.

X-Ray Diagnosis

Because of the characteristic growth features of the villous tumor and its superficial mucosal origin, the roentgenologic findings are diagnostic. The defect appears as an intraluminal mottled shadow caused by traces of barium lodged between the fronds of the villous tumor. The external outline and contour of the intestine is normal because villous tumors are mucosal lesions and permit the bowel wall to distend normally.

Treatment

In the management of villous tumors of the lower half of the rectum, there are surgeons with strong and often conflicting convictions as to management.

Harp and associates[3] advocate removal of the rectum if the lesions cannot be locally excised.

Davis[4] advocates posterior proctotomy to obtain greater exposure to enable complete excision.

Dresse and associates[5] advocate a procedure to completely eradicate the villous tumor at the time of initial surgery to obviate the possibility of overlooking a small focus of cancer. Wheat and Acherman[6] state that piecemeal operations have no place in the treatment of villous tumors. Some surgeons advocate the Kraske posterior resection to remove villous tumor

of the rectum. Cohn[7] emphasized that treatment should be radical and that snaring, cautery, piecemeal excision, and radiation have no place in the treatment of villous tumor.

There must be a reason that good surgeons have such varied opinions in the management of villous tumors. I attribute this wide divergence of opinions to a misunderstanding of the importance that characteristic proctoscopic findings have toward contributing to the final diagnosis, especially while working in close cooperation with the pathologist. Villous tumor has a high incidence of carcinoma in situ and biopsy specimens taken at random in such an area may be reported as invasive adenocarcinoma with the extent of invasion undetermined. Castleman and Krickstein[8] reviewed 60 cases in their own institution that were diagnosed as carcinomatous polyp and concluded that the diagnosis was in error. Atypia and carcinoma in situ had been incorrectly diagnosed as cancer. None had metastasis. Carcinoma in situ is not a palpable indurated area as in carcinoma. This is a lesion which requires close cooperation between the proctologist and the pathologist as well as a mutual understanding of their objective.

During the past 22 years, 401 villous tumors were treated at the Ochsner Clinic.[1,9] Fifty-one were treated by staged piecemeal biopsy excision and fulguration. Extensive benign rectal lesions not suitable to fulguration had either endoanal pull-through or Swenson's pull-through procedure.

Small villous tumors at any proctoscopic level are treated by excision biopsy and fulguration of the remnant.

Villous tumors diagnosed as benign that are 2 to 4 cm in size and above the peritoneal reflection, and larger lesions in the lower half of the rectum are eradicated by excision with the electrocautery snare or by multiple biopsy excision followed by staged fulguration when necessary. The treatment is repeated at intervals of from five to seven days. The number of treatments varies according to the size and thickness of the tumor. All tissue removed is sent to the pathologist. A large villous tumor takes two to three treatments before a noticeable decrease in the size is evident. However, continued treatments at five-day intervals will succeed in eradicating large villous tumors. One must remember that benign villous tumor is a superficial mucosal tumor, and deep fulguration into the bowel wall is contraindicated because this results in deformity of the lumen by cicatricial contracture. Bleeding is minimal as a rule. At the time of the final fulguration treatment, the mucosa surrounding the healing fulgurated ulcer site is fulgurated lightly.

Postoperative Management

Because the junction of the villous tumor with the normal mucosa cannot be detected by inspection, we usually fulgurate the normal appearing mucosa about the fulgurated ulcer site as the final treatment. It is most important that the patient be followed at three-month intervals for a year, every six months for another year, and yearly therafter. The patient with residual villous tumor will develop a minute sessile mammillation 2 mm in size three to six months following fulguration, at the site of the healed fulguration scar. Biopsy of the mammillation reveals it to be microvillous adenoma. These mammillations must be fulgurated. If no mammillations develop after a year and a half to two years, you can be assured that the lesion has been

completely eradicated and will not recur. The impression that villous tumors, after excision or fulguration, have a high incidence of recurrence is erroneous. Recurrence is the result of inadequate treatment and failure in the postoperative followup. Inadequately treated patients usually return years later with a villous tumor at the initial site.

The mucosa has great regenerative quality and only minimal scarring or deformity is noted after fulgurating large villous tumors.

When an abdominoperineal resection of the rectum is done for a large benign villous tumor of the lower rectum because of the high incidence of potential malignancy in these lesions or the possibility of overlooking a small cancer in an otherwise large benign villous tumor, the patient has been subjected to a procedure with significant morbidity and mortality and has to live with a colostomy thereafter. Treatment by piecemeal biopsy excision and fulguration does have its inherent element of error and adds greatly to the surgeon's responsibility in management. In all cases of large villous tumors, other members of our department are called in consultation to evaluate the lesion. We feel strongly that in this lesion, the proctologist and the pathologist must work closely for the best interest of the patient.

The final decision for therapy can be made only after frank discussion with the patient and his assurance that he will cooperate by returning for adequate postoperative examinations.

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Dr. Hanley, Ochsner Clinic, 1514 Jefferson Highway, New Orleans, La 70121.

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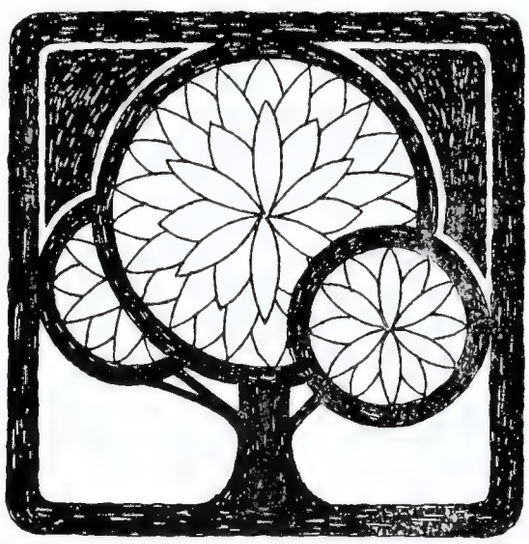

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TMA honors retiring librarian

To many Texas physicians, students, and medical personnel, the name Pauline Duffield is synonymous with the Texas Medical Association's Memorial Library. Last month, Miss Duffield retired as head librarian, a post she had held since November 1952. Originally from Richwood, WVa, Miss Duffield graduated from George Peabody College for Teachers in Nashville with a bachelor of science degree. She gained her medical library training at Orleans Parish Medical Society Library and Tulane University School of Medicine Library in New Orleans. For a time she served as assistant librarian at Vanderbilt University School of Medicine Library. During the six years prior to her joining the TMA staff, she was librarian at the Medical and Chirurgical Faculty of Maryland Library in Baltimore. Upon her retirement, Miss Duffield returns to a part of the country she considers home —North Carolina. But she'll have little time settling into her house in Asheville before she'll travel to Australia, a retirement gift to her from the TMA Board of Trustees.

On behalf of the TMA Board of Trustees, Dr. Don G. Harrel (left), vice chairman of the board, and Dr. Nym L. Barker, TMA president, presented a bouquet of roses to retiring librarian Pauline Duffield. In addition, the association honored Miss Duffield at a reception Nov 21 at the headquarters building in Austin.

Responsible for library growth

The TMA library expanded greatly under Miss Duffield's charge. In 1952, the library boasted fewer than 7,000 books and 400 periodical titles. Today, library volumes number 60,000, and approximately 1,200 medical journals are received each month. The film library of TMA has 16mm film holdings of over 250 professional and lay films, 1,600 cassettes covering 22 various medical topics, and a collection of 36 slide sets. In addition, through the use of the MEDLINE network, the computerized data base of the National Library of Medicine is available to TMA members.

During her tenure as librarian, Miss Duffield handled literally thousands of requests for information each year. These requests from physicians all over the state came by mail, telephone, telegraph, often scribbled on prescription pads, and covered every medical subject imaginable.

In 1973 the TMA Board of Trustees established the Pauline Duffield Library Development Fund in her honor. A year and a half later, the fund passed the $10,000 mark in contributions. The interest from the invested fund is used to purchase additional library materials. As they continue to grow, this fund and the broad range of services offered by the library will serve as living memorials to the person who devoted so much of her life to making the TMA Memorial Library one of the outstanding medical libraries in the Southwest.

No skeletons: just a fascinating hobby found in family history

Throughout her childhood she was told stories of family traditions and events—the Normans were considered great storytellers. But for many years Dr. Lois Norman, Sherman pediatrician, was too busy studying and practicing medicine and participating in community affairs to give any serious consideration to her family lineage and pedigree. She was satisfied with the tradition that she was of English and French ancestry.

One day an article appeared in an Arkansas newspaper about her great-grandfather who had moved from Georgia to Union County, Ark in 1854. The article stirred some latent interest in family history among some Norman cousins, and they began to write to each other, sharing what information they each had on the several family lines descending from their great-grandparents. For Dr. Norman, this was the start of a serious hobby interest in genealogy.

Another exciting event for Dr. Norman was the discovery of a packet of old letters in a trunk in the family attic. Some of these letters, which had been written over a hundred years previously, gave interesting insights into the life and times of those years.

After extensive correspondence with numerous descendants of her parental great-grandparents, Dr. Norman began her first project, compiling a family history. She undertook recording family lineages, and writing biographical sketches of family ancestors for what she called the "Family Book." She said that she did not, at first, think of this as genealogy; she was just recording information for her own immediate family. Now this book has been revised several times as she has gathered more information.

"There is never a stopping place in genealogical research, for one is always seeking another missing link, or looking for another piece to fit into the family puzzle," Dr. Norman remarked.

Her family history with lineages and charts has been put on microfilm by the Genealogical Society of the Latter Day Saints. The film will be preserved for posterity in their fire proof, bomb proof vault in Salt Lake City.

This year, Dr. Norman plans to publish a book entitled "The Normans of Normandy Hall." This family history includes the descendants, the ancestors, and the allied families of her great-grandparents, William Sheppard and Martha Adelaide (Watts) Norman, who built their home on a plantation in Union County, Ark and called it "Normandy Hall."

Helpful "pen pals"

Through the years, Dr. Norman's correspondence has snow-balled and has extended to many previously unknown relatives and other individuals who are interested in the same family lines.

"I have come to know, by correspondence, many delightful people," she said. "My 'pen pals,' as I call them, have been generous and helpful in contributing genealogical information. It is not unusual to receive a letter from someone I have never heard of, who has heard that I am searching a particular family line. They sometimes have their 'finds' to share or may request information."

In addition to correspondence, Dr. Norman has taken her searches to the nearby genealogical libraries in Dallas, Fort Worth, and Houston. "I had no experience in gene-

alogical research, and in the beginning, my method was often that of trial and error. Most librarians are helpful in showing you how to use the library, but they cannot and will not do research for you," she explained. Sometimes her research ended with an ancestor not her own, and she soon learned the value of proof and documentation.

Where to start

It is possible, according to Dr. Norman, for one to trace one's pedigree even though there is little knowledge of family history—if one is willing to sacrifice time and effort.

"We usually know something about our parents and grandparents, but it is really amazing how little or nothing we know about our great-grandparents. Beyond that, our information is hazy," she stated. "The place to start, always, is with one's parents, then step by step work back by generations to one's earliest known progenitor. This can be done with family records, Bible records, vital statistics, U S census records, old newspaper accounts, cemetery and land records. When you realize that you have 64 great-great-great-great-grandparents, the task appears formidable. Usually only a few of these ancestors are traced."

Any serious involvement in genealogical research includes a study of history and geography as well as sociology. This makes genealogy all the more fascinating to Dr. Norman.

"When I visit the places where my ancestors lived, I feel a sense of history. To walk on their land and to sit in their churches makes me feel that I know them better. One of my greatest thrills was to hold in my

Dr. Lois Norman has practiced pediatrics in Sherman since 1939. (Photo courtesy of the *Sherman Democrat.*)

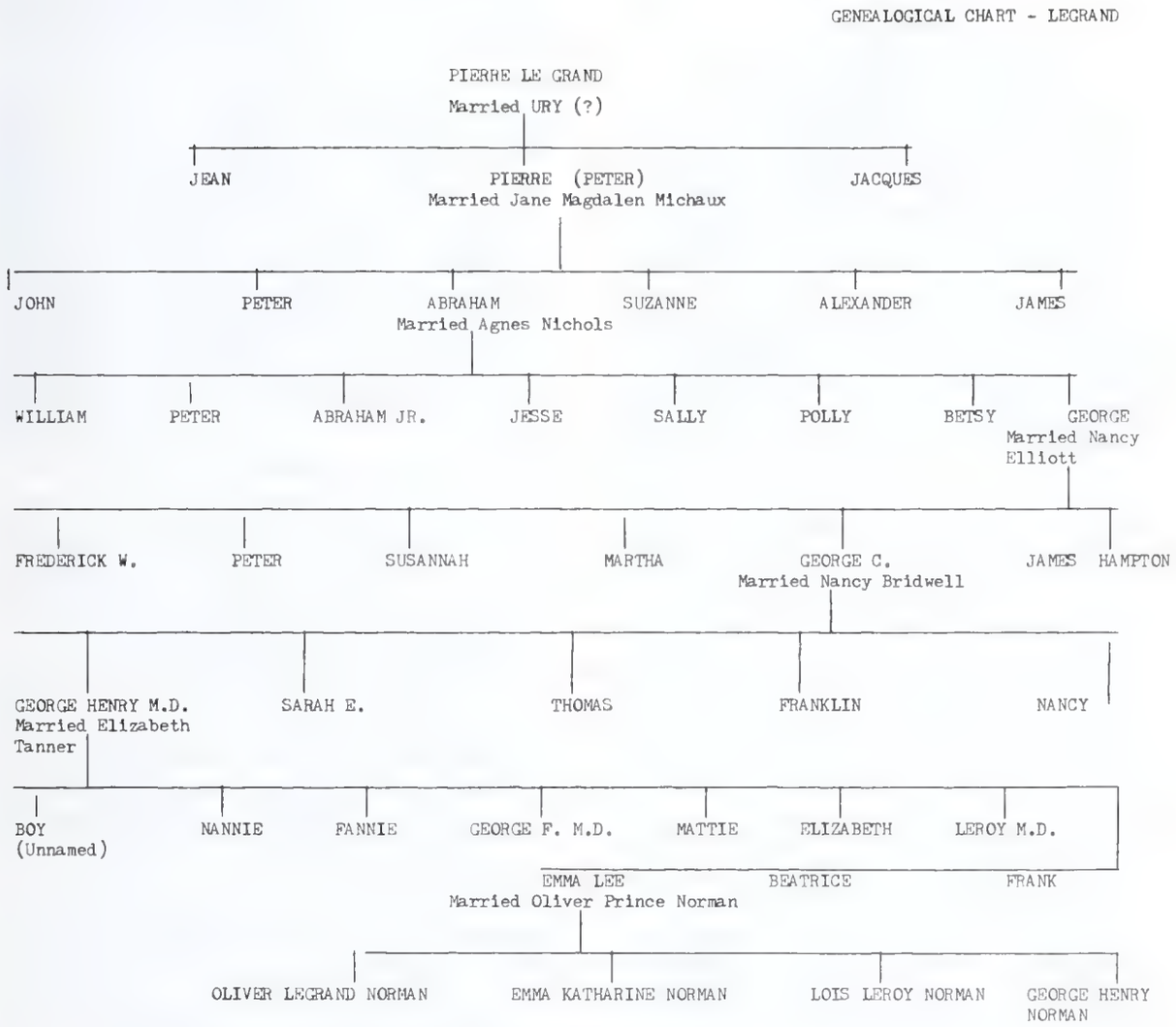
hands the original marriage bond of my great-great-grandparents made in 1809 and now filed in a box in the attic of a Kentucky courthouse," she related.
In her searching also, Dr. Norman has found that not all of her ancestors were patriots. Three families were divided in the cause of freedom for the American colonies.

An interesting vacation pastime

Dr. Norman frequently schedules her vacations in a particular state or city where she wishes to do research. Many times these excursions are rewarding; other times they are fruitless. In addition to the states already mentioned, she has visited the National Archives in Washington, DC and the Mormon Library in Salt Lake City. Dr. Norman explained that the Mormon church has done a great deal to promote genealogical research because a facet of the religion is to make a search for the members' ancestors, baptize them in the faith by proxy, and seal them in the church. She said it came as quite a surprise to find that one of her own forebears, a member of the Church of England, had been re-baptized by proxy and sealed in the Mormon church for all eternity. She said that thousands of persons conduct research in the excellent Mormon library regardless of their faith.
Dr. Norman described the many spots her research has taken her. "I have searched in county court houses, some of which are hot and dusty in summer; others are beautiful and air conditioned. Many of the county records have been lost through fire, neglect, and deterioration, which is a great disappointment to a researcher."
She continued, "A great effort has been made to put extant records on microfilm and place them in state archives and libraries. Since the state archives are the repositories for most of the county and state records. I usually spend most of my time in these, looking for tax and land records, wills, probate records, administration of estates, and court records, all of which are very valuable in genealogical research. I also explore old cemeteries where ancestors and their families have been buried."
She said that one of her most delightful experiences has been the finding of cousins, some in the fifth generation from a mutual ancestor. She has had many interesting visits with such cousins in Georgia, Virginia, and Kentucky.

Resources

There are many genealogical societies and historical societies to which one can belong. Dr. Norman also said there are genealogical publications, books, and magazines with considerable information. Every library has an index and printed bibliography. There are also courses in genealogy offered by some colleges.
"Many 'how to' books have been written, but one learns by doing research which is tedious and exacting, but very fascinating. It is always exciting to find a new ancestor. It didn't take long for me to become addicted," she stated.
Dr. Norman added that there are many professional genealogists who are certified and belong to professional societies. One can obtain a list of some of these by writing to the different state archives. She said the professional will research for a fee. She said this can be expensive as they usually search by the hour in addition to travel expenses. She has used this service on two occasions when she needed information and could not go to the locality. But Dr. Norman prefers to do her own research, saying it is much more fun, and there is a feeling of accomplishment.
Although she is a first generation Texan



This genealogical chart traces the "Le Grand" branch of Dr. Norman's family.

and most of her searching has been in other states, Dr. Norman spoke highly of the genealogical libraries in Texas.

"I began my first serious research on the records of Georgia as several of my ancestors had migrated there from Virginia after the American Revolution. I spent hours in the library reading US census records, histories, and genealogical publications. I have also searched for ancestors in Alabama, Arkansas, the Carolinas, Kentucky, and Virginia."

There has been increased interest in genealogy in the past several years but not necessarily due to the bicentennial. Dr. Norman said that the membership requirements of patriotic societies have given much impetus to the research. When the societies were first started, they did not ask for as much proof and documentation as now required.

When discussing genealogy, one frequently touches upon another area, heraldry. Dr. Norman has not made a study of heraldry as she has not proved that any of her ancestors had a coat-of-arms.

"My earliest known progenitor was in Virginia in the 1600s. And while my English,

Family trees as such are not generally used by genealogists, but Dr. Norman made one for her family book (pictured below). At right, Dr. Norman poses with her family book which contains records of family lineage, biographical sketches, and other information about her ancestors.

Scotch-Irish, and French ancestors go back pretty far in America, I have not done any research 'beyond the sea,' " she said. "My maternal line descended from the French Huguenots who fled France during the persecution of the Protestants during the reign of King Louis XIV. My Le Grand-Michaux line was easier to trace since much research had been done in Virginia and published."

In becoming a member of the Huguenot Society of the Founders of Manakin in the Colony of Virginia, Dr. Norman had to prove her descent from her Huguenot ancestor, Pierre Le Grand, who came to Virginia in 1700. Her uncle was working on this research at the time of his death in 1942. Twenty-five years later, Dr. Norman began her research on this line and, with a very old family Bible and Kentucky land records, she proved her lineage and joined the Huguenot Society. She has since been to Manakin where her ancestors settled and also to the Elise Walloon Church in Amsterdam, Holland where two of her Huguenot ancestors were married in the 1690s.

Family association

One of the results of her family research was the organization of the Norman Family Association three years ago. All of the known descendants of Dr. Norman's great-grandparents are members of the association. A directory has been compiled, and members receive a newsletter two or three times a year. Dr. Norman serves as the official family historian and genealogist and continues research on the family. She also writes biographical sketches of ancestors to present at association meetings. In addition, she has made hundreds of slides from old family photographs which are shown at family reunions.

During the time that she has been doing genealogical research, Dr. Norman has met many interesting people and has made many new friends—the aspect she feels is the most rewarding of her hobby.

"Researchers share and help one another. I have learned to appreciate what my forebears did to make our country, as it is today, possible. Our ancestors were much too busy building this country and exploring new frontiers to leave written records and memoirs, but they left us a great heritage," she commented. "When some family members ask me why I do all the work on genealogy, I tell them I enjoy it; but most of all, I want to preserve the records of our ancestors for future generations. I often quote the Chinese proverb: 'To forget one's ancestors is to be like a brook without a source and a tree without roots.' "

LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

PHYSICIAN LIABILITY IN DRAWING BLOOD FOR BLOOD-ALCOHOL TEST

On Nov 13, 1975, Attorney General John Hill issued Opinion # H-736, which in summary holds: "A blood sample cannot be legally taken without the consent of a person suspected of a traffic related offense. Without apparent consent, a physician taking the sample could be subject to civil liability."

The attorney general, in response to inquiries from a criminal district attorney, issued the opinion which may have far-reaching implications for both physicians and law enforcement officials.

The attorney general ruled that "while there is no constitutional limitation, the statutes indicate that a blood sample may not be taken legally from an arrested person without his consent." Additionally, the opinion holds that a physician "may not extract blood from a suspect at the request of a law enforcement officer where there is no apparent consent, and the physician would face possible civil liability for the withdrawal of the blood."

In 1969, the Legislature enacted Article 6701 (l)-5, V.T.C.S., which provided that any person shall be deemed to have given consent to the breathalizer test for intoxication by merely utilizing the public roads and highways.

This statute also provided that a person arrested "may consent to the taking of any other type of chemical test, or tests, to determine the alcoholic content of his blood . . ." (emphasis added)

The statute further provided that a person qualified under the statute (a physician, qualified technician, chemist, registered professional nurse, or licensed vocational nurse under the supervision of a licensed physician) drawing blood "at the request of a law enforcement officer under the provisions of this act . . . shall not be held liable for damages arising from the request of the law enforcement officer to take the specimen as provided herein, provided the blood was withdrawn according to recognized medical procedures, and provided further that the foregoing shall not relieve any such person from liability for negligence in the withdrawing of any blood sample . . ." (emphasis added)

However, the attorney general has ruled that the consent of the suspect is a "necessary prerequisite before the non-liability provisions of the Act become operable, since consent is 'one of the provisions of the Act' and the physician must withdraw the blood 'under the provisions of the Act' to escape possible liability."

Further, the opinion states that "where there is no consent by the suspect in a traffic related offense, there can be no legal withdrawal of his blood, and the doctor extracting this blood is not per se protected by the non-liability portion of the statute. A physician, however, need not prove actual consent to avoid liability, in our opinion. If he reasonably relies upon the appearance of consent, he will not be liable for extracting the suspect's blood even if actual consent was never given. Reliance upon the representations of an officer in the matter may very well be reasonable in particular situations, depending upon the facts there involved."

Several conclusions can be drawn from this important opinion which has the force and effect of law until overruled by an appellate court or until the law is changed by the Legislature.

First, a physician should not withdraw

blood until he has received the consent of the arrested party, or unless there is an "appearance of consent" by the arrested party.

Second, failure to secure consent will waive protection of the non-liability provisions of Article 6701 (l)-5.

Third, the withdrawing of blood without consent may subject the physician to civil liability for damages which may result from the blood alcohol test and its use in court and not be limited to liability for simple negligence in the act of withdrawing the blood sample.

The attorney general's opinion does not describe further the "appearance of consent" upon which the physician may rely, nor does the opinion amplify upon this statement that the physician may, "depending upon the facts involved" rely upon the representations of the arresting officer that consent has been granted.

For this reason, the physician would be well advised to secure the consent himself where the arrested party is able to grant consent and does not appear to be under the influence of drugs or alcohol, or to refuse to draw the blood because of possible civil liability.

MEDICINE AND THE LAW

LOST EYE MAY RESULT IN UT LIABILITY

The Dallas Court of Civil Appeals on Oct 16, 1975, held that a plaintiff might bring suit against The University of Texas Health Science Center at Dallas, the Board of Regents of The University of Texas System, and the State of Texas to recover damages for mental anguish, headaches, and nervousness resulting from the negligent loss of the plaintiff's left eyeball after it had been surgically removed and while it was being prepared for laboratory examination at the UT Health Science Center.

The appellate court reversed and remanded for trial the case which had been dismissed by the trial court on the grounds that the plaintiff had failed to state a cause of action that would bring him within the waiver of governmental immunity under the Texas Tort Claims Act.

The opinion of the Court of Civil Appeals in *Mokry vs University of Texas Health Science Center at Dallas, et al* held that the allegations in the plaintiff's petition regarding the negligent actions of the employees in the pathology lab at the health science center could be the proximate cause of the plaintiff's resulting mental pain and anguish, nervousness and headaches. Therefore, the State was not protected by governmental immunity under the Tort Claims Act.

While the opinion is wholly related to procedural and statutory interpretations, the language of the opinion may have far-reaching implications for physicians and employees of physicians who are charged with preserving and examining specimens, tissue, x-ray films, and the like.

Discussion of case

The plaintiff in *Mokry vs University of Texas Health Science Center* alleged that his left eye was surgically removed by his private physician on Feb 6, 1973, and was then delivered to The University of Texas Health Science Center at Dallas for pathological examination to determine whether the eye was "cancerous." While the eyeball was in the custody of "an employee of the health science center and while that employee was engaged in the course and scope of her employment, it came out of the container in which it was being washed and was lost down the drain."

The plaintiff claims that a number of negligent acts by the defendant's employee constituted the "proximate cause of the loss of plaintiff's eyeball and of his resulting mental pain and anguish, nervousness and headaches which damaged him in the amount of $60,000." The negligent acts named included the failure to have a screen or strainer covering the drain opening in the sink, failure to cover the mouth of the container in which the eye had been deposited so as to prevent it from coming out of the container, allowing the gauze cover of the container to come off, and allowing the container to tip or fall over causing the eye to come out and be lost down the drain.

Since the case was dismissed by the trial court and not tried before a jury which would have decided the fact issues, one can only speculate as to whether or not the jury would have agreed with the allegations and awarded damages.

Nevertheless, the Court of Civil Appeals does hold that the pleadings adequately allege a cause of action for damages resulting from negligent acts or omissions of an employee of the State, acting within the "scope of his employment arising from some condition or use of tangible property under circumstances which the

State, if it were a private person, would be liable to the plaintiff."

Also, the court held that the terms "personal injury" and "bodily injury" are equivalent terms and include all types of injury a person might receive, including mental injury of traumatic depressive reaction. The court cited a line of Texas cases which conclude that foreseeable physical injuries sustained as a result of severe emotional impact are grounds for recovery in such a cause of action as that pled by plaintiff.

The court stated:

> Mokry's allegations that he suffered personal injuries in the form of headaches and nervousness as a result of negligence of employees of the State in the use of tangible property owned by the State state a valid cause of action within the Texas Tort Claims Act. Accordingly, we sustain appellant's points of error and hold that the Trial Court erred in dismissing the cause of action.

The tangible property referred to above includes the sink, drain, container, and other equipment used by the health science center's employee when the eye was accidentally washed down the drain.

Conclusion

The implications of this opinion should be clear to physicians and hospitals in caring for specimens, tissues, and x-rays since this court has served notice that it will recognize a causal relation between any mental pain or anguish and the negligent destruction or loss of such tissues before analysis by medical specialists.

The Office of the General Counsel will follow this case and report further on its outcome, if the case is not settled out of court. It will be interesting to observe the jury findings of fact and determination of damages, if any, should this case be tried before a jury.

TMA Office of General Counsel
Sam V. Stone, Jr.

Medical Newsmakers

DR. R. LEE CLARK of Houston has been the recent recipient of several honors. He has been invited to participate in Laredo's 79th annual George Washington's birthday celebration in February as 'Mr. South Texas." He succeeds other such recipients including Gov Dolph Briscoe, Sen Lloyd Bentsen, former Gov John M. Connally, and University of Texas football coach Darrell Royal. In addition, Dr. Clark has been elected vice president and president-elect of the American Cancer Society, Inc. His election was announced during the annual meeting of the society's national board of directors in New York in November. Dr. Clark is president of The University of Texas M. D. Anderson Hospital and Tumor Institute.

Dr. Clark

DR. ELSON B. HELWIG, a physician whose expertise has enabled cancer specialists to more easily diagnose skin tumors, has received the tenth annual Heath Memorial Award for "outstanding contributions to the better care of cancer patients." The award was presented by The University of Texas M. D. Anderson Hospital and Tumor Institute at its 20th Annual Clinical Conference in November in Houston. Dr. Helwig is chairman of the center for Advanced Pathology, chief of the Skin and Gastrointestinal Pathology Division and associate director for consultation at the Armed Forces Institute of Pathology in Washington, D C.

A prominent vascular surgeon from Michigan has accepted the job as chairman of the Department of Surgery for The University of Texas Southwestern Medical School. DR. WILLIAM JAMES FRY, holder of the Frederick A. Coller Professorship at the University of Michigan Medical School, will fill a position vacated in late 1973.

Houston physician, DR. CHARLES M. GAITZ, is the new president-elect of the Gerontological Society. Dr. Gaitz is chief of gerontological research at the Texas Research Institute of Mental Sciences and the principal investigator of a five-year study for the National Institute of Mental Health on leisure and mental health across the life cycle.

EDWIN F. SMITH has been appointed administrative director of the Travis County Medical Society in Austin. He also serves as director of the TCMS Blood Bank.

DR. LYSLE H. PETERSON has been named vice president for professional and developmental affairs at The University of Texas Health Science Center at Houston. Dr. Peterson comes to Texas from the University of Pennsylvania where he served as professor of physiology, director of the Bockus Research Institute and medical board chairman and research director of the university's graduate hospital. He will be responsible for the coordination of all academic and professional service functions for component units of the health science center.

Recently honored for his contribution to West Texas culture was DR. I. F. HUDSON of Stamford. The recognition was bestowed by the West Texas Chamber of Commerce at its mid-year meeting in Amarillo. Dr. Hudson is mayor of Stamford and is a founder and current president of the Stamford Art Foundation. The retired radiologist

has pursued his interest in art for the past 15 years.

DR. DONALD H. McDONALD, an Abilene pediatrician, has been awarded the Taylor-Jones County Medical Society's Gold-Headed Cane Award. Dr. McDonald is the sixth physician from the county society to receive the award.

Continental Oil Company has awarded a $50,000 grant to The University of Texas M.D. Anderson Hospital and Tumor Institute for the study of cancer-causing agents in the environment. The award was officially presented in October to DR. CHARLES R. SHAW, chief of the Medical Genetics Section at M.D. Anderson and principal investigator on the research program.

DR. GARABED EKNOYAN, professor of medicine at Baylor College of Medicine and chief of medical service at Ben Taub General Hospital, has been named the first Herman Brown Teaching Professor of Medicine at Baylor. The newly created teaching professorship was recently established by the board of trustees of The Brown Foundation, Inc.

Just back from a volunteer medical tour in Indonesia is DR. JACK L. TURNER of Fort Worth. This was Dr. Turner's 24th such trip as a volunteer physician. According to Dr. Turner, Indonesia has 120 million people and only 6,000 doctors. He said the Indonesians were "gracious, gentle, and grateful" to the volunteer physicians of CARE-MEDICO.

The Congress of Delegates of the American Academy of Family Physicians recently re-elected DR. SAM A. NIXON of Floresville as vice speaker.

Medicine in literature

HANDBOOK OF PEDIATRICS, Henry K. Silver, C. Henry Kempe and Henry B. Bruyn, 11 ed, Los Altos, Lange Medical Publications, 1975, 750 p, $7.50.
In this edition of the handbook, the authors have again made extensive revisions and additions, but the format and objectives have remained the same—to present to the practicing physicians and medical students a concise and readily available digest of the material necessary for the diagnosis and management of pediatric disorders.
The handbook is not intended to be used as a substitute for the more complete pediatric texts and reference works, but as a supplement to them.

CURRENT SURGICAL DIAGNOSIS & TREATMENT, J. Englebert Dunphy and Lawrence W. Way, ed 2, Los Altos, Lange Medical Publications, 1975, 1,123 p, $15.
The aim of this book is to provide medical students, residents, and practicing surgeons and physicians with the essential and most recent developments in all fields of surgery. Each chapter has been revised, and current sources of more detailed information are provided in the references. In addition, many illustrations have been added to this edition.

IN THE TMA LIBRARY

Crouch J E: *Functional Human Anatomy,* ed 2. Philadelphia, Lea & Febiger, 1972.

Frey G D and Klobukowski C J: *Nuclear Medicine Technology Examination Review Book.*Flushing, Medical Examination Publishing Company, Inc, 1974.

Gaver J R: *How to Help Your Doctor Help You.* New York, Pinnacle Books, 1975.

Goodman L S and Gilman A (eds): *The Pharmacological Basis of Therapeutics,* ed 5. New York, Macmillan Publishing Company, Inc, 1975.

Grant W M: *Toxicology of the Eye,* ed 2. Springfield, Charles C Thomas Publisher, 1974.

Karpman H L and Locke S: *Your Second Life.* Los Angeles, J P Tarcher, Inc, 1975.

Kaufmann H J (ed): *Progress in Pediatric Radiology: Intrinsic Diseases of Bones.* New York, S Karger, 1973, vol. 4.

Maddin S, Brown T H, and Lynne-Davies G (eds): *Current Dermatologic Management,* ed 2. St. Louis, C V Mosby Co, 1975

Seham M: *Blacks and American Medical Care.* Minneapolis, University of Minnesota Press, 1973.

Skoog T: *Plastic Surgery.* Philadelphia, W B Saunders, 1974.

Slaby A E and Wyatt R J: *Dementia in the Presenium.* Springfield, Charles C Thomas Publisher, 1974.

Williams R J: *Physicians' Handbook of Nutritional Science.* Springfield, Charles C Thomas, 1975.

CONTINUING EDUCATION COURSES

NOTE: The American Hospital Association and the Association for Hospital Medical Education Project, under the direction of Dr. Clement R Brown, now offers training assistance to those responsible for planning and implementing programs in continuing medical education. This training program is titled the AHA-AHME Workshop for Training Health Professionals in Quality Assurance. For more information, contact Dr. Brown at the American Hospital Association, 840 N Lake Shore Dr, Chicago 60611.

JANUARY

General Medicine

Title: Texoma Area Physician Hospital Television Programs
Sponsors: Memorial Hospital of Denison
Dates: January, March, May, 1976; third Tuesday
Duration: Intermittent; 1 hour instruction per day
Fee: None
Designed For: General practitioners; Specialists
Enrollment: Open
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Method: Television
Contact: Mike Mays, Exec Dir, Memorial Hospital of Denison, 1000 Memorial Dr, Denison 75020

Title: Southmore Medical Center Lecture Series
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; Southmore Hospital
Location of Course: Southmore Hospital, Pasadena
Dates: Jan 13-May 25, 1976
Duration: Tuesdays, 2 hours instruction, one ½ day surgical program on a Saturday, 25 total hours instruction
Fee: $10
Designed For: General practitioners; Hospital staff
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Grant Taylor, Dir, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Obstetrics & Gynecology

Title: Current Obstetric and Gynecologic Practice
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Jan 29-Feb 4, 1976
Duration: Continuous, 7 days, 6 hours instruction per day, 41 total course hours
Fee: $300
Designed For: Specialists
Enrollment: Maximum, 150
Credit: 41 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, San Antonio 78284

Ophthalmology

Title: Symposium on Ophthalmology for the Non-Ophthalmologist
Sponsor: UT Medical School at Houston, Program in Ophthalmology
Location of Course: Hermann Hospital Auditorium, Houston
Date: January, 1976
Duration: ½ day, 4 hours instruction
Designed For: General practitioners; Specialists in Ophthalmology
Credit: AAFP
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Richard S Ruiz, Dir, Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77025

Title: Lecture Course in Ophthalmology
Sponsor: Baylor College of Medicine, Dept of Ophthalmology
Location of Course: Baylor College of Medicine, Houston
Dates: January-March, 1976
Duration: Intermittent, to be determined
Fee: To be determined
Designed For: General practitioners; Specialists
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Fred M Taylor, Dir, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Psychiatry

Title: Psychiatry: A Look to the Future
Sponsors: Texas Research Institute of Mental Sciences, Houston; Baylor College of Medicine
Location of Course: Ship Stella Solaris, Galveston to Honduras
Dates: Jan 10-17, 1976
Duration: Continuous, 7 days
Fee: $25 for course plus $100 cruise deposit
Designed For: Specialists in Psychiatry
Contact: Dr. Charles M Gaitz, Head, Clinical & Sociological Research Division, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Title: Transactional Analysis 101 Workshop
Sponsor: UT Health Science Center at San Antonio

Location of Course: UT Health Science Center at San Antonio
Dates: Jan 30-31, 1976; Mar 12-13, 1976
Duration: Continuous, 2 days, 12 total course hours
Fee: Individual, $50; Married couple, $75; Full-time student, $40
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, panel, television
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, San Antonio 78284

Radiology and Radioisotopes

Title: Review of New Trends in Diagnostic Radiology
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Jan 22-24, 1976
Duration: Continuous; 3 days; 6 hours instruction per day; 18 total course hours
Fee: $120
Designed For: Specialists
Enrollment: Minimum, 50
Credit: 18 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, San Antonio 78284

FEBRUARY

Anesthesiology

Title: Postgraduate Course in Anesthesiology
Sponsor: UT Medical Branch, Galveston
Location of Course: UT Medical Branch, Galveston
Dates: Feb 2-5, 1976
Duration: Continuous, 4 days, 8 hours instruction per day
Fee: To be determined
Designed For: Specialists
Credit: 32 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, patient demonstration, seminar
Contact: Nekee Doherty, Assistant to the Director, UT Medical Branch, Continuing Education Division, 8th Floor, John Sealy Hospital, Galveston 77550.

Family Medicine

Title: Family Practice Review
Sponsor: UT Medical Branch, Galveston
Location of Course: Galvez Hotel/Motel, Galveston
Dates: Feb 1-7, 1976
Duration: Continuous, 7 days, 8 hours instruction per day
Fee: $125
Designed For: General practitioners
Enrollment: Maximum, 110
Credit: 44 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar, television
Contact: Nekee Doherty, Assistant to the Director, UT Medical Branch, Continuing Education Division, 8th Floor, John Sealy Hospital, Galveston 77550

Titie: A Practical Workshop in Pulmonary Diseases
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 14-15, 1976
Duration: Continuous, 2 days, 11½ total course hours
Fee: $75
Designed For: General practitioners; Specialists
Credit: 11½ hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee observes procedure, lecture, open question, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: International Medical Assembly of Southwest Texas
Sponsors: UT Health Science Center at San Antonio; International Medical Assembly of Southwest Texas
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 26-27, 1976
Duration: Continuous, 2 days, 7-8 hours instruction per day, 15 total course hours
Fee: $35
Designed For: General practitioners; Specialists
Credit: 15 hours, AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

General Medicine

Title: Current Methods of Diagnosis and Treatment of Arthritis and Rheumatic Diseases
Sponsors: Baylor College of Medicine, Houston; Upjohn Co.
Location of Course: Marriott Motor Hotel, Houston
Date: Feb 7, 1976
Duration: Continuous, 1 day
Fee: $25
Designed For: General practitioners; Specialists

Credit: AAFP; Category I, AMA Physican's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund, Houston 77025

Obstetrics & Gynecology

Title: Annual Conference on Fetus and Newborn in High Risk Pregnancy
Sponsors: Texas Tech University School of Medicine, Dept of Obstetrics and Gynecology; Texas Perinatal Center, Dept of Pediatrics, Lubbock
Location of Course: Southpark Inn, Lubbock
Dates: Feb 26-28, 1976
Duration: Continuous, 3 days, 7 hours instruction per day
Designed For: Specialists in Obstetrics-Gynecology, Pediatrics
Credit: 18 hours, AAFP Elective
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel, seminar, programmed instruction (self-teaching device)
Contact: Dr. James E Dyson, Assistant Dean for Education, Texas Tech University School of Medicine, Box 4569, Lubbock 79409

Ophthalmology

Title: Symposium on Ophthalmology for the Non-Ophthalmologist
Sponsor: UT Medical School at Houston, Program in Ophthalmology
Location of Course: Hermann Hospital Auditorium, Houston
Date: Feb 7, 1976
Duration: ½ day, 3 hours instruction
Fee: $15
Designed For: General practitioners
Credit: AAFP
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Richard S Ruiz, Director, Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77025

Title: Retina Symposium
Sponsor: UT Medical School at Houston, Program in Ophthalmology
Location of Course: Hermann Hospital Auditorium, Houston
Date: Feb 21, 1976
Duration: 1 day, 8 hours instruction
Fee: $50
Designed For: Specialists in Ophthalmology
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Richard S Ruiz, Director, Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77025

Title: Annual Symposium of the San Antonio Ophthalmology and Otolaryngology Society
Sponsors: UT Health Science Center at San Antonio; San Antonio Ophthalmology and Otolaryngology Society
Location of Course: UT Health Science Center at San Antonio
Date: Feb 28, 1976
Duration: Continuous, 1 day, 7 hours instruction per day, 7 total course hours
Fee: $40
Designed For: Specialists
Credit: 7 hours, AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Otolaryngology

Title: The Voice Institute
Sponsors: Baylor College of Medicine, Houston; Methodist Hospital, Houston
Location of Course: Methodist Hospital, Houston
Dates: Feb 5-6, 1976
Duration: Continuous
Fee: To be determined
Designed For: Specialists
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Pathology

Title: Pathology of the Liver
Sponsors: UT Health Science Center at Dallas; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: UT Health Science Center at Dallas
Dates: Feb 14-15, 1976
Duration: Continuous, 1½ days, 9 total course hours
Fee: $100; $65 for house officers, Fellows and trainees
Designed For: Specialists in Internal Medicine, Pathology, Gastroenterology
Credit: 9 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Title: A Review of Clinical Microbiology
Sponsor: A Webb Roberts Center for Continuing Education, Dallas
Dates: Feb 23-26, 1976
Duration: Continuous, 4 days, 6 hours instruction per day
Fee: $120
Designed For: Specialists in Pathology
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

diatrics

le: Perception Problems of the Pedi-
ic Subject
onsor: Baylor College of Medicine,
uston
cation of Course: Shamrock Hilton
tel, Houston
tes: Feb 5-6, 1976
ration: Continuous, 2 days, 16 hours
truction
e: $125
signed For: General practitioners;
ecialists
dit: AAFP; Category I, AMA Physi-
n's Recognition Award
aching Methods: Audiovisual mate-
s, lecture, open question, panel
ntact: Dr. Fred M Taylor, Director, Of-
e of Continuing Education, Baylor
llege of Medicine, 1200 Moursund
e, Houston 77025

e: Pediatrics 1976—A Mini-Sym-
sium
onsor: District I Medical Society
cation of Course: Downtown Holiday
, El Paso
te: Feb 7, 1976
ration: 1 day, 7 hours instruction
e: $25
signed For: General practitioners;
ecialists in Pediatrics
dit: 7 hours, AAFP Elective
aching Methods: Audiovisual mate-
s, lecture, open question, seminar
ntact: Dr. Laurance N Nickey, Secre-
y, District I Medical Society, 1301
ntana, El Paso 79902

le: Developmental Theory of Sensory
tor Integration
onsors: Texas Occupational Therapy
Association: Capital-Centex District; UT Systemwide School of Nursing
Location of Course: Thompson Conference Center, Austin
Dates: Feb 26-28, 1976
Duration: Continuous, 2½ days, 6 hours instruction per day
Fee: $45
Designed For: General practitioners; Specialists in Pediatrics
Enrollment: Maximum, 250
Credit: 15 hours
Teaching Methods: Audiovisual materials, lecture, open question, patient demonstration
Contact: Ms. Cindy Jones, Seminar Coordinator, Texas Occupational Therapy Association, 8812 Tallwood No 87, Austin 78759

Radiology & Radioisotopes

Title: High Energy Electron, X-Ray and Neutron Dosimetry
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Dates: Feb 2-7, 1976; Aug 2-7, 1976
Duration: Continuous, 6 days, 63 total course hours
Fee: $250
Designed For: Specialists
Enrollment: Maximum, 15
Teaching Methods: Lecture, open question
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: Refresher Course in General Diagnostic Radiology
Sponsors: Dept of Radiology, UT Southwestern Medical School; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: Fairmont Hotel, Dallas; and Lecture Room D 1.502, UT Southwestern Medical School, Dallas
Dates: Feb 19-21, 1976
Duration: Continuous, 3 days, 5-8 hours instruction per day, 18 total course hours
Fee: $150
Designed For: Specialists in Radiology
Credit: 18 hours, Category I, AMA Physician's Recognition Award
Teaching Method: Lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Surgery

Title: The Use of Staplers in Surgery
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 19-20, 1976
Duration: Continuous, 2 days, 11 hours instruction
Fee: $160
Designed For: Specialists
Enrollment: Maximum, 30 physicians, 15 nurses
Credit: 11 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, workshop handling instruments, experimental lab for clinical application of materials
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

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Recent deaths

Dr. Carman

Dr. J. B. Brown

Dr. Jesse Benjamin Brown, 68, a retired Temple physician, died Sept 22, 1975.
Dr. Brown was a native of McGregor, Tex. He received his BA degree from West Texas State University at Canyon (1928) and his MD from The University of Texas Medical Branch, Galveston (1934).
Dr. Brown was associated with King's Daughters Hospital and Clinic until his retirement in 1969.
He was a past president of the Bell County Medical Society, the Bell County Health Society, and the Bell County TB Association.
Surviving are his wife, Jean Dooling Brown of Temple; a son, George H. Brown, a member of the armed services stationed in Germany; a brother, J. T. Brown of Beaumont; and two sisters, Mrs. Rachael Crouch of McGregor, and Mrs. W. R. DeVine of Austin.

Dr. D. M. Cameron

Dr. David Molloy Cameron, El Paso orthopedic surgeon, died Aug 19, 1975.
Dr. Cameron, 64, was a native of Joplin, Mo. He attended Texas Western College of The University of Texas in El Paso, and, in 1931, graduated from the University of Arizona, Tucson. In 1935, he graduated from The University of Texas Medical Branch.
He was an intern at John Sealy Hospital, Galveston (1935-36), and served a residency in surgery at the University of Minnesota Hospitals, Minneapolis (1936-37). He also did postgraduate work at the Mayo Clinic, Rochester, Minn (1937-40).
Dr. Cameron entered the military service in 1942 as a captain. He served overseas, and was chief of the orthopedic section, William Beaumont Army Medical Center, El Paso. He left the service in 1946 with the rank of lieutenant colonel.
The doctor's professional memberships included the El Paso County Medical Society, the American Medical Association, the American Academy of Orthopaedic Surgeons, the Clinical Orthopedic Associ tion, the Western Orthopedic Associatio the Southwestern Surgical Congress, the Texas Orthopaedic Association, and the Industrial Medical Association.
He was a former first vice-president of th El Paso County Society for Crippled Children. He also had served on the Medical Advisory Board, and had been director o the National Foundation for Infantile Paralysis, El Paso County. During 1957 he was medical staff chief of the Southweste General Hospital, Inc, in El Paso.
His other memberships included Los Cab leros, El Paso Sheriff's Posse, the El Pas Country Club, and the El Paso Club.
Surviving Dr. Cameron are his wife, Ruth Crow Cameron, and daughter, Ann Came ron Adams, both of El Paso; sons, Dr. Don Frank Cameron, of Lubbock, and the Rev. David Cameron of Billings, Mont; an three grandchildren.

Dr. H. F. Carman

Dr. Henry Franklin Carman, Dallas, died Sept 15, 1975, at the age of 77. Dr. Carman, a lung specialist, had practiced Dallas 53 years.
Dr. Carman was an associate professor at The University of Texas Southwestern Medical School. He served on the Baylor University Medical Center staff 53 years, until he retired in November, 1974.
A native of Buffalo, Tex, he was a graduat of Baylor University and Baylor College o Medicine (1922).
He was an honorary member of the Texas Medical Association. Other professional memberships included the Dallas County Medical Society, American Medical Association, Texas Academy of Internal Medicine, American College of Chest Physicians, and American College of Physician

. Carman also was a 32nd degree Ma-
n and a member of Trinity Valley Lodge
d First Baptist Church of Dallas.
rviving are his wife, Margaret Wilson
rman; two sons, Frank Carman of Chi-
go, and Lynn Carman of Kansas City, Mo;
rother, Harold Carman of Seattle; and
o sisters, Mrs. Mary Mansfield of
nceton, and Mrs. Bertha Whitaker of
ke Jackson, Tex.

. Frederick Fink

. Frederick Fink, retired Dallas physi-
n, died Oct 10, 1975, at the age of 76.
. Fink formerly was medical director
Chance Vought Aircraft. He also had
rved as medical director of Franklin
e Insurance Company. In 1952, he joined
e staff of Texas Instruments, where he
eated a health center and was medical
ector.
ative of Leon Springs, Tex, he was a
aduate of The University of Texas at
stin and The University of Texas Medi-
Branch (1923). His internship was at
iladelphia General Hospital.
. Fink was a past president of both the
ciety of Life Insurance Medical Direc-
's of Texas and the Texas Industrial
dical Association, and a board member
the American Association of Life Insur-
ce Medical Directors.
also was an honorary member of the
llas County Medical Society, Texas Med-
l Association, and Dallas Southern Clin-
l Society. His other professional mem-
rships included the American Medical
sociation, the Academy of Occupational
dicine (emeritus), and the American
dical Association of Vienna, Austria.
rvivors include his wife, Nancy E.
Knight Fink, Dallas; two sons, Albert
nry Fink of Dallas, and Walter Henry
k of Concord, Calif; and a daughter,
s. Richard John Schilling of Blooming-
n, Ind.

Dr. N. W. Haas

Dr. Nelson Wise Haas, of San Benito, died Aug 25, 1975.
Born in Buffalo, NY, he was graduated from the State University of New York at Buffalo, School of Medicine, in 1928. His internship was at Millard Fillmore Hospital, also in Buffalo.
During Air Force service in World War II, Dr. Haas was stationed in Harlingen. Upon leaving the service, he moved to San Benito to practice obstetrics, as well as family practice and minor surgery. He retired from practice in 1974.
Dr. Haas was a member of the Masonic Order, the Elks Lodge, and Temple Beth Israel.
His professional memberships included the American Medical Association and the Cameron-Willacy County Medical Society.
Survivors include three sons, Gregory M. Haas of McLean, Va; Jonathan Haas, Phoenix, Ariz; and David Haas, Stamford, Conn; seven grandchildren, and a nephew.

Dr. Fink

Dr. Hart

Dr. M. S. Hart

Dr. Maynard Sterling Hart, El Paso, died Sept 4, 1975, at the age of 65.
Dr. Hart, a pathologist, was the director of the clinical laboratory, Hotel Dieu Hospital, El Paso.
The clinical laboratory was dedicated in honor of Dr. Hart in December, 1974, for his contribution to Hotel Dieu since 1940. He had been director since 1945, and was also head of Radiology and Pathology Consultants of El Paso.
He was born in Chicago and graduated from Northwestern University Medical School there. He was an intern at Wesley Pavilion Hospital, Chicago, and a resident at the University of Oklahoma Hospitals, Oklahoma City. He also had a pathology fellowship at the University of Oklahoma Hospitals.

After moving to El Paso and establishing a practice in pathology, Dr. Hart entered the Army in 1942, and served with the Fifth Army Laboratory in Australia, the South Pacific, the Philippine Islands and Japan for three years. He was discharged in 1946 with the rank of lieutenant colonel.

Dr. Hart was appointed to the State Health Advisory Committee for Comprehensive Health Planning in 1970, and was on the ethics committee of the College of American Pathologists.

He was a founding Fellow of the College of American Pathologists, Fellow of the American Society of Clinical Pathologists, member of the International Academy of Pathology, and a Diplomate of the American Board of Pathology.

He had served as president of the El Paso County Medical Society, was president of the City-County Health Board, director of the medical society's tumor board and president of El Paso County Unit of the American Cancer Society.

He also was a member of the Practitioners of Pathology Foundation, American Society of Cytology, Association of Blood Banks, Society of Nuclear Medicine, Sigma Chi Fraternity, and the Masonic Lodge.

Also among his honors was the George T. Caldwell Award for excellence in contribution to the field of pathology in Texas, which he received in January, 1975.

Survivors include his wife, Mrs. Phyllis Irby Hart, El Paso; a son, Phillip B. Hart; and a daughter, Mrs. John Page Kemp, Jr., all of El Paso, a stepmother, two sisters, and six grandchildren.

Dr. R. J. Holloran

Dr. Richard Joseph Holloran, Houston internist, died Aug 1, 1975.

Dr. Holloran, 64, had resided in Houston since 1941. He was a native of St. Louis.

He received his preliminary education in St. Louis, and, in 1933, was graduated from Holy Cross College, Worcester, Mass, with the bachelor of arts degree. In 1937 he obtained his MD from Georgetown University School of Medicine in the District of Columbia.

Dr. Holloran's internship was served at William Beaumont Army Medical Center El Paso, and his residency was served in Houston. He also did postgraduate work the University of Pennsylvania, Philadelphia.

Dr. Holloran's professional membership included the Harris County Medical Soci and the American Medical Association.

Surviving are his wife, Elizabeth Nichols Holloran, Houston; son, Patrick J. Hollo Saratoga, Calif; sister, Mrs. Margaret Dr New York; brother, Mark R. Holloran, St. Louis; and one granddaughter.

Dr. J. L. Jopling

Paris physician, Dr. Julian Lawson Joplin died Sept 12, 1975.

Dr. Jopling, 69, was a native of Madisonville, Tex. He moved to Paris in 1946, after serving with the US Army. He had been a member of the staff of the McCuistion Regional Medical Center.

He was a graduate of The University of Texas and The University of Texas Medic Branch. His internship was at the Henry Ford Hospital in Detroit, Mich.

Dr. Jopling was a member of the Holy Cross Episcopal Church, Masonic Lodge No. 985, the Paris Golf and Country Club and the American Legion. He was a former member of the Paris School Board, Paris Junior College Board of Regents, and the board of directors of the Texas Heart Association. He also was an honorary member of the US Air Force Reserve.

He was a former vice-president of the Lamar-Delta County Medical Society, and a member of the American Medical Associa tion and the Southern Medical Associatio

Surviving are his wife, Mary Louise Kirkpatrick Jopling, Paris; three daughters, Mrs. H. Grady Barrett, Jr., of Saginaw, Mich, Mrs. Mark Seiler of Stephens Point, Wis, and Mrs. Stephen F. Weger of

nsas City, Mo; two sisters, Mrs. Fred nnell of Denton and Mrs. J. A. Reed of llas; a brother, H. S. Jopling of Marble lls; and five grandchildren.

. J. R. Old

. James Rowland Old, Beaumont physi- n, died Sept 9, 1975. Death was the re- lt of the crash of a plane piloted by . Old.

e native of Dallas was a graduate of mper Military School, Booneville, Mo; uthern Methodist University, Dallas 952); and Baylor College of Medicine 956). He served his internship at Jef- son Davis Hospital, Houston, and his sidency at Parkland Memorial Hospital, llas. At the time of his death, Dr. Old was amily practitioner and a member of the culty of Baylor College of Medicine.

e was a former president of the Texas apter of the Flying Physicians Associa- n. In 1964, he was vice-president of the fferson County Tuberculosis Associa- n. He also was a Jefferson County direc- r of the Piney Woods Tuberculosis and espiratory Disease Association. Among s other memberships were Pi Kappa pha fraternity and Phi Chi medical aternity.

s professional memberships included e Jefferson County Medical Society, the merican Medical Association, the Ameri- n Academy of Family Physicians (fel- w), and Southeast Texas Academy of mily Practice.

. Old is survived by his wife, Carolyn omas Old; one son, James R. Old, Jr.; o daughters, Lori and Andrea Old, all Beaumont; his mother, Sallie Lucy Old Winnsboro, Tex; and one brother, ynne Edward Old of Houston.

r. H. M. Pearson

r. Murble Henry Pearson, San Antonio, ed July 10, 1975, as the result of myo- rdial infarction.

r. Pearson, 65, was a member of the aff of the San Antonio State Chest Hospi- l.

A 15-year resident of San Antonio, the surgeon was a native of Johnson County, Tex. His preliminary education was obtained at West Texas State Teachers College, Canyon, and the University of Oklahoma, Norman. In 1938, he graduated from the University of Oklahoma School of Medicine in Oklahoma City.

Dr. Pearson served his internship at St. John General Hospital, St. John, NB, Canada; and his residency at Brooke Army Medical Center, Fort Sam Houston, Tex. He was a retired lieutenant colonel in the US Army Medical Corps. Having served in both World War II and the Korean Conflict, he was the recipient of the Croix de Guerre, Silver Star Medal, Belgian Fourragere Medal, and other honors. Dr. Pearson's military career spanned 20 years (1939-59).

His professional memberships included The Bexar County Medical Society and the American Medical Association.

Surviving are his wife, Doris Fosbrooke Pearson, San Antonio; daughters, Mrs. Mary Pearson Bettcher, Denton; Mrs. Victoria Pearson Reed, Seattle; brothers, Dr. D. B. Pearson and Dr. Huston Pearson, both of Dallas; sisters, Mrs. Wilma Mikeska, Texas City; Mrs. Mary Alice Goodson, Bartlesville, Okla; Mrs. Marcella Blackburn, Casper, Wyo; Mrs. Clifford White, Fort Worth; Mrs. Russie May Anderson, Santa Clara, Calif; and Mrs. Nelda Overby, Boca Raton, Fla.

Dr. Old

Dr. Pearson

Dr. Margraves

Dr. R. D. Margraves

Dr. Ross D. Margraves, 61, of Houston, died Sept 4, 1975.

Dr. Margraves was a senior staff member of Hermann Hospital, Houston. A native of Roxton, Tex, he had resided in Houston since 1937.

He was a graduate of Texas A&M University (1934) and The University of Texas Medical Branch (1936). His internship was at St. Luke's Hospital, St. Louis. His urological residencies were at Turner Urological Institute, Houston, and Touro Infirmary, New Orleans.

Dr. Margraves was a member of the Rox-

Dr. Selders

Dr. Upshaw

Dr. Young

ton Methodist Church, the Houston Amateur Radio Club (president, 1957), and the River Oaks Country Club. He also was Deputy Director of Civil Defense for the city of Houston.
His professional memberships included the American Urological Association, the Harris County Medical Society, the American Medical Association, the American College of Physicians, and the American College of Surgeons.
Dr. Margraves was a veteran of World War II, having served in the US Navy from 1941 to 1946. He achieved the rank of commander.
Surviving are his wife, Nina Benware Margraves; daughter, Mrs. Nancy Margraves Hoover; son, Ross D. Margraves, Jr.; and eight grandchildren, all of Houston.

Dr. R. E. Selders

Dr. Raymond E. Selders, 82, of Houston, died Aug 31, 1975.
Dr. Selders was a native of Wadapetra, Ill. He was a graduate of the University of Oklahoma and the University of Oklahoma School of Medicine (1927).
His internship was at St. Joseph's Infirmary, Houston, and he completed a surgical residency at Worcester City Hospital, Worcester,Mass. Dr. Selders also did postgraduate work at the University of Pennsylvania.
The retired physician was a veteran of World War I. He had been a Mason for 62 years. He also had been a solo flutist with the Houston Symphony Orchestra.
His professional memberships included the American Medical Association and the Harris County Medical Society.
Surviving Dr. Selders are his wife, Wilma Scheer Selders, Houston, one niece and one nephew.

Dr. Bette Y. Upshaw

Dr. Bette Young Upshaw, 56, of Corpus Christi, died July 24, 1975.
Dr. Upshaw, a native of New Orleans, received her BA degree from The University of Texas (1940). She also was a graduate of The University of Texas Medical Branch (1942).
She specialized in dermatology and syphilology. Prior to moving her practice to Corpus Christi in 1950, Dr. Upshaw had practiced at the Mayo Clinic, Rochester, Minn, and in Dallas. She retired in 1963.
Dr. Upshaw became an inactive member of Texas Medical Association in 1957. She had been a member of the American Medical Association, the Nueces County Medical Society, and the American Academy of Dermatology. She also was a member of Phi Beta Kappa and Alpha Omega Alpha.
Surviving are her husband, Dr. Jackson Upshaw, and son, Gerald J. Upshaw, both of Corpus Christi.

Dr. C. B. Young

Dr. Carl Buchanan Young died Sept 22, 1975. He resided in Houston.
Dr. Young, 84, was a native of Lynchburg, Va. He was a graduate of Holy Cross Academy, Lynchburg, and the University of Virginia Medical School.
He served his internship at Richmond Memorial Hospital, Richmond, Va, and his surgical residency at C&O Hospital, Huntington, WVa. He also did postgraduate work at the University of Pennsylvania.
Dr. Young's professional memberships included the Harris County Medical Society, the American College of Surgeons, the American Medical Association, and the American Association of Railway Surgeons. He also was a fellow of the American College of Surgeons and a life member of the Military Surgeons Association.
Survivors include his wife, Leona Feeney Young, Houston; daughters, Sister Eleanor Anne Young, San Antonio; Mrs. Mary Lou Schmitt, Houston; Mrs. Elizabeth Y. Womack, Littleton, Colo; and Mrs. Catherine Dietz, Arlington; sons, Carl B. Young, Jr., Corpus Christi; William H. Young, Graham, Tex; Robert L. Young and John B. Young, both of Houston; 16 grandchildren; and numerous nieces and nephews.

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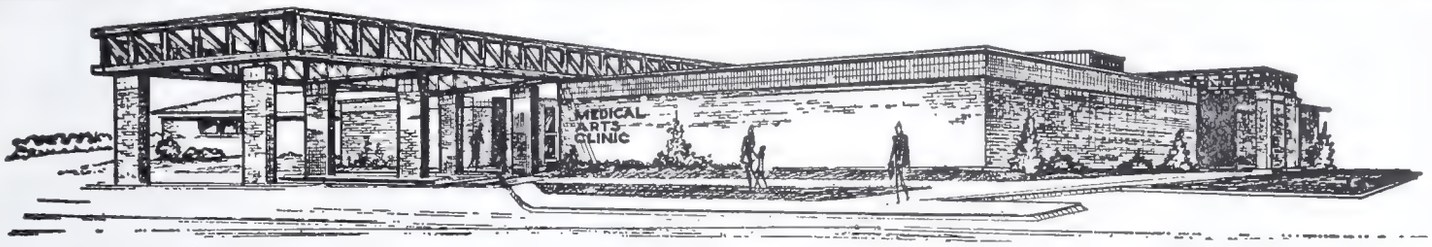

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J. Paul Smith
Administrator

Editorials

THE SMALL BEAUTIFUL TIME BOMB

The asbestos fibril is such a tiny thing—so tiny that 1 million of them laid side by side will measure only an inch. It resists time, water, acids, fire, and body fluids. And these properties make it a time bomb. It enters the body through the nose, throat, or mouth. It lodges in the lung, pleura, pericardium, peritoneum, or gastrointestinal tract.

This beautiful mineral (that's what shimmers in tiger's-eye) lies quietly ticking in the body. It may take 20 years for the explosion to occur, but that is not long for asbestos.

A Bantu child is made to work filling jute bags with amosite asbestos. Before the age of 12 he will die of pulmonary fibrosis (asbestosis) and cor pulmonale.

A native woman has lived near an asbestos mine for 15 years. A mesothelioma develops in her pericardium; the pathologist finds asbestos fibrils (ferruginous bodies) in the resected specimen.

In England, workers with more than 20 years' experience in an asbestos-textile factory have 11 times as much cancer as men in the general population.

A housewife in Texas gets a chest x-ray. Her doctor finds scars in her lungs and pleurae. No, she never worked with asbestos, ". . . but my husband has been an insulator (using asbestos) for 20 years. His clothes sure are dusty, and I always shake them out before I wash them."

In Pennsylvania, 42 people died of mesothelioma between 1958 and 1963. Ten of the 42 had known exposure to asbestos. The other 32 were relatives of the workers, lived in the vicinity of an asbestos factory, or had some minor exposure to asbestos.

Now we come to Tyler, Texas, where an asbestos insulation plant opened in 1954. By the time it closed 18 years later, it had employed 890 workers who were exposed to asbestos (amosite) for varying periods. In this issue of *Texas Medicine*, Greenberg and his co-workers present their account of a continuing evaluation of the health of these men. This study reports the results of sputa examinations of 456 former employees. Twenty (4% of those tested) had sputa with severe epithelial atypias, and 217 (48%) had mild atypias of squamous metaplasia. One worker's sputum specimen was reported to be positive for bronchogenic carcinoma.

True, one person with lung cancer out of 456 examined is not impressive, but that is only the first sputtering of the time bomb. Usually, 10 to 20 years pass before asbestos affects the body. Pleural effusion and calcification, pulmonary fibrosis, lung cancer, intestinal cancer, and mesothelioma eventually appear. As time passes and the bomb explodes, more of the workers will succumb to incurable diseases—fibrosis and cancer.

Deplorable! Were the asbestos workers told their jobs were dangerous? Didn't they know of the danger to others in their households from the asbestos dust that they brought home? Were they provided rooms in which to change clothes? To all of these, the answer is, "No."

Was industry informed? From the moment the alarm was sounded at the Tyler plant in 1962 to the day of its closing ten years later, the management denied that asbestos was dangerous. Its scientists and physicians denied that the concentration of asbestos to which the workers were exposed was toxic to the body. The Industrial Hygiene Foundation of America refused to declare the plant safe. The company, nevertheless, fought the Department of Labor and then the Bureau of Occupational Safety and Health. After a long, hard struggle, the plant was forced to close.

Whose responsibility is it to keep the air clean of asbestos? The government is ponderous and irresolute. Industry is more interested in staying in business. To quote Paul Brodeur, science writer for *The New Yorker* magazine, "The responsibility is clearly up to men and women . . . who are the independent medical and scientific community. Only you, after evaluating the problems and after apprising yourselves of the dangers of asbestos, can say, 'No, I will not countenance such a situation.'"

Daniel Jackson, MD, Houston.

Quotation from Mr. Brodeur used with permission.

Both often

Before prescribing, please consult complete product information, a summary of which follows:

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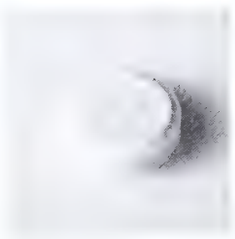
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium® (diazepam) ℞

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

surveillance because of their predisposi-
ion to habituation and dependence. In
pregnancy, lactation or women of child-
bearing age, weigh potential benefit
against possible hazard.

Precautions: If combined with other psy-
chotropics or anticonvulsants, consider
carefully pharmacology of agents em-
ployed; drugs such as phenothiazines,
narcotics, barbiturates, MAO inhibitors
and other antidepressants may potentiate
its action. Usual precautions indicated in
patients severely depressed, or with latent
depression, or with suicidal tendencies.
Observe usual precautions in impaired
renal or hepatic function. Limit dosage to
smallest effective amount in elderly and
debilitated to preclude ataxia or over-
sedation.

Side Effects: Drowsiness, confusion, diplo-
pia, hypotension, changes in libido, nausea,
fatigue, depression, dysarthria, jaundice,
skin rash, ataxia, constipation, headache,
incontinence, changes in salivation,
slurred speech, tremor, vertigo, urinary
retention, blurred vision. Paradoxical re-
actions such as acute hyperexcited states,
anxiety, hallucinations, increased muscle
spasticity, insomnia, rage, sleep disturb-
ances, stimulation have been reported;
should these occur, discontinue drug. Iso-
lated reports of neutropenia, jaundice;
periodic blood counts and liver function
tests advisable during long-term therapy.

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Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

What do you need to know?

The *1976 Texas Continuing Education Directory for Physicians* should be arriving in your office about now. It is one of your benefits of TMA membership—a service supported and encouraged by the Committee on Continuing Education, compiled and coordinated through the *Texas Medicine* staff.

I urge you to look through it and notice the variety of courses available. There are 166 listed, and I expect every physician could find one or more courses that would be helpful.

Continuing education is not new to medicine; indeed, in one form or another, every medical student is told, "This is just the beginning; to choose medicine is to choose a lifetime of learning."

Several specialty and state organizations now require that members have a specified number of credit hours each year to retain membership. The TMA does not support compulsory continuing education at this time for membership or licensure, but it does believe that continuing education is essential to keep abreast of daily medical practice needs, and that many forms of education are worthwhile.

Our own Council on Medical Education and Hospitals is informed of the developing issues in the field, among them the controversial questions of recertification and relicensure.

The Council on Annual Session, working with many organizations and individuals, arranges to provide an annual scientific program that is one of the best in the nation.

The AMA has accredited the "planned program of continuing medical education of the Texas Medical Association," which means the scientific programs offered at the TMA annual session.

The AMA site survey team visited the 1974 annual session in Houston, and cited the following strengths of the TMA's continuing education program: (1) scope and quality, (2) close cooperation in planning program by the Association and 18 specialty societies, and (3) careful thought and high quality of the *Continuing Education Directory* and *Texas Medicine*.

Another educational tool free to TMA members is use of the Memorial Library—books, journals, reprints, tapes, films, and Medline computer access to the National Library of Medicine.

The continued seeking to expand knowledge is part of being a physician, and the TMA offers its members many opportunities to fulfill this need.

Nym L. Barker, MD, President, Texas Medical Association.

Feb76

Texas Medicine

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The Torbett Clinic and Memorial Hospital continues to utilize the Marlin Hot Mineral Water and other forms of physical therapy as an adjunct in the treatment of arthritis and allied rheumatic conditions.

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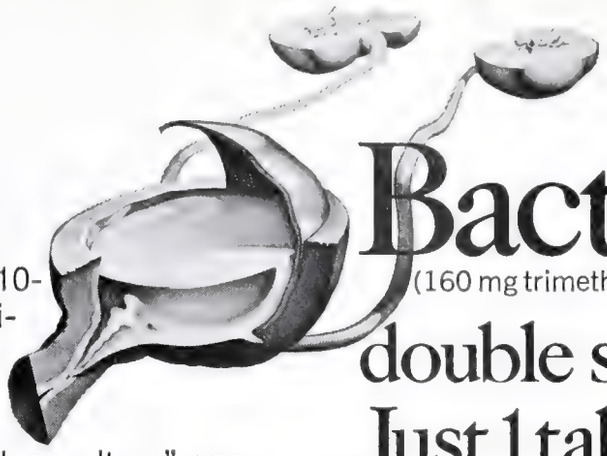
10-day Bactrim therapy outperforms 10-day ampicillin therapy.



In a multicenter, double-blind study of patients with chronic or frequently recurrent urinary tract infection, Bactrim 10-day therapy outperformed ampicillin 10-day therapy by 27.2%, when comparing patients who maintained clear cultures for eight weeks. Criterion for "clear culture" was 1000 or fewer organisms/ml of urine.

While adverse reactions were mild (*e.g.*, nausea, rash), more serious reactions can occur with these drugs. See manufacturers' product information for complete listing.

Note: Bactrim single strength tablets were used in these clinical trials. However, studies have established the bioequivalency of Bactrim DS with the single strength tablets.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

double strength tablets Just 1 tablet B.I.D.

Bactrim™

(80 mg trimethoprim and 400 mg sulfamethoxazole)

2 tablets B.I.D.

For chronic or frequently recurrent cystitis and pyelonephritis due to susceptible organisms.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections. The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **Data are insufficient to recommend use in infants and children under 12.**

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) every 24 hours
Below 15	Use not recommended

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole — bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.

Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole; fruit-licorice flavored — bottles of 16 oz (1 pint).

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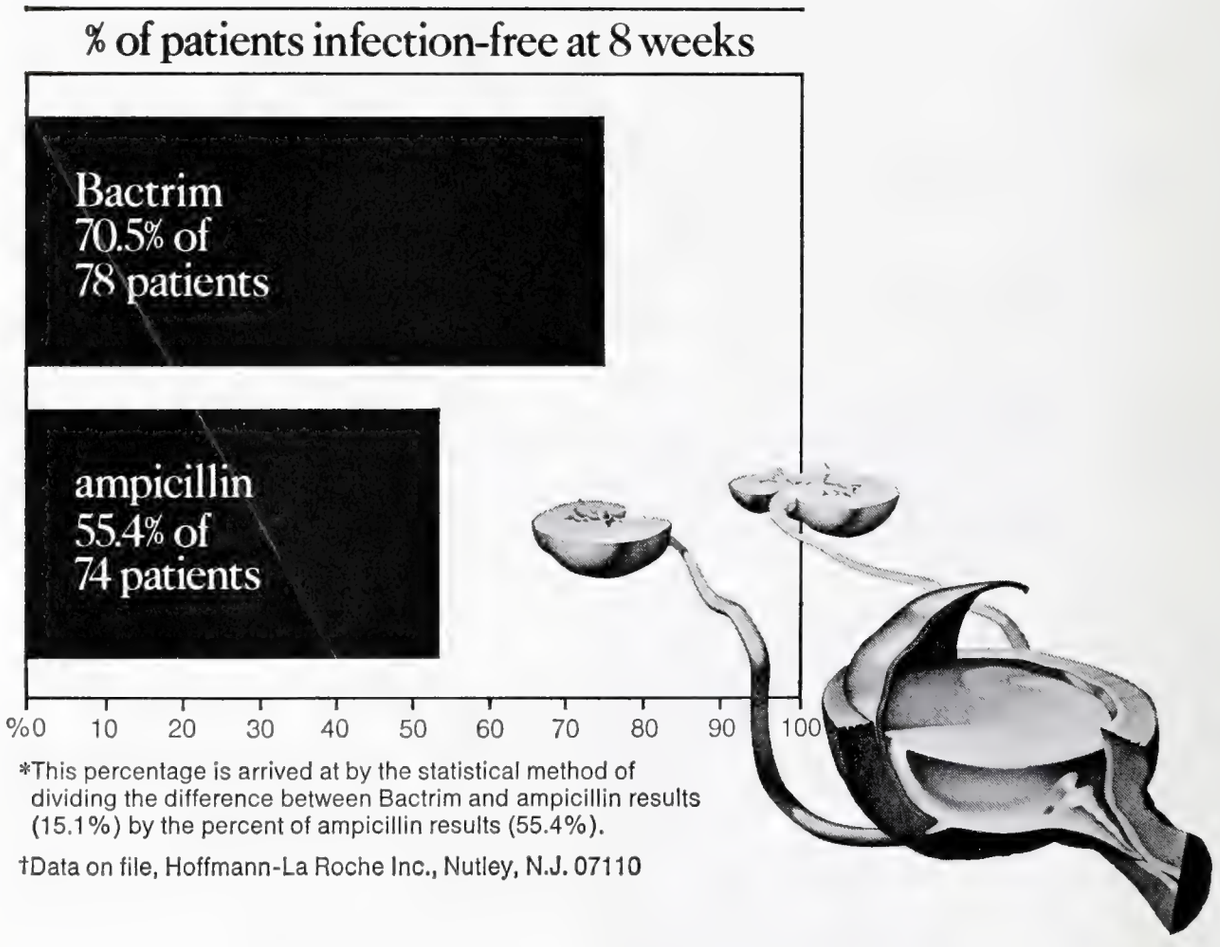
In a multicenter study of patients with chronic or frequently recurrent urinary tract infections

Bactrim™ was 27.2%* more effective than ampicillin in keeping patients infection-free for 8 weeks.†



*This percentage is arrived at by the statistical method of dividing the difference between Bactrim and ampicillin results (15.1%) by the percent of ampicillin results (55.4%).

†Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 07110

Bactrim™ DS
(160 mg trimethoprim and 800 mg sulfamethoxazole)
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Bactrim™
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Please see summary of product information on preceding page.

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ON THE COVER

Health care for migrant workers has always been a problem. A pilot study in pre-paid health insurance is being coordinated by the Laredo-Webb County Health Department. The successes of this program and its potential application to other segments of the population are discussed in a feature beginning on p 101.

NEXT MONTH

Articles scheduled for publication in March are on the role of history in educating future family physicians, preferences for family practice among entering medical students, problems and prospects in rural health care, ventricular aneurysm in Chagas' myocardiopathy, the clinician's prerogative to request autopsy, the shock lung, and modern laboratory diagnosis of thyroid disease.

The Dallas Advanced Seminars in Internal Medicine

April 26-29, 1976

**Wisdom enough to leech us of our ills is daily spun,
But there exists no loom to weave it into fabric.**

—Edna St. Vincent Millay

The Dallas Advanced Seminars in Internal Medicine announce the second annual course to be held April 26 through April 29, 1976, at Baylor University Medical Center, Dallas, Texas. The presentations will include formal lectures and informal small group seminars in all nine major subspecialty areas, totaling 24 hours, and are designed to meet the needs of the practicing physician who plans to take certification or recertification in Internal Medicine, or who seeks a comprehensive curriculum-type review of recent basic and clinical advances in Internal Medicine. Prospective applicants may for the sake of convenience enter their name and address on this announcement and mail to:

Albert Roberts, M.D.
Associate Dean For Clinical Affairs
University of Texas Southwestern Medical School
5323 Harry Hines Blvd.
Dallas, Texas 75235

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PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

WORMS BLITZED

A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

One prescription can economically treat the entire family.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Pinworms, roundworms controlled with a single, non-staining dose of

ANTIMINTH®
(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

*Data on file at Roerig.

Please see prescribing information on facing page.

NEWS

PSRO amendments signed into law; allow redesignation

On Dec 31, President Gerald Ford signed into law HR 10284, a bill which, among other items, provides under certain circumstances for the redesignation of a state into a single professional standards review organization (PSRO) area. The law also amends other parts of the Social Security law including Medicare and Medicaid.

The amendment to the bill providing for the PSRO redesignation was authored by Sen Lloyd Bentsen of Texas. Another notable provision, authored by Sen Robert Dole of Kansas, extends, under special circumstances, until Jan 1, 1978, the date until which the secretary of the Department of Health, Education and Welfare (HEW) must exclusively name a non-profit professional organization as the PSRO for any area.

In Texas, where a single statewide PSRO has been favored by the medical and health establishments, the bill allows reactivation of the attempts to secure a single PSRO designation for the state.

The former HEW regulation designating nine PSRO areas in Texas had been challenged as being "arbitrary and capricious" by the Texas Medical Association and several individual physicians in the US District Court for the Western District of Texas in Austin. At press time, a ruling in the case by Judge Jack Roberts was just announced. Judge Roberts declared that the nine designated areas for Texas were unlawful and invalid. He referred the issue back to the secretary of HEW for appropriate action and enjoined the secretary from implementing the PSRO areas in Texas until the remand had been fully completed. This ruling in favor of TMA and the physicians will be psychologically and legally fruitful in further efforts to have Texas renamed a single PSRO area.

Current activities in state

Following the signing of HR 10284, the Texas Institute of Medical Assessment sent two letters to the secretary of HEW. The first requested that a poll of practicing physicians be made in the state regarding their PSRO preference. According to the provisions of the new law, the secretary of HEW must, prior to naming a PSRO within a state in which two or more areas had already been designated, question doctors of medicine and osteopathy as to whether or not they support a change from the present designations to a single area designation. If more than 50% of the doctors in a PSRO region re-

sponding to such a question respond in the affirmative, then the secretary would establish the entire state as the single PSRO area.
Secondly, TIMA filed a letter with the secretary of HEW to be the single PSRO in the state. TIMA was chartered in 1973 as a nonprofit corporation to work toward the implementation of a statewide system of medical care review, evaluation, and education. From its inception, it was the intent of TIMA to apply for designation as the PSRO for Texas. Representatives of major medical organizations including TMA and the Texas Osteopathic Medical Association joined efforts in TIMA's undertaking.
In addition, TIMA has contracted with the Texas Medical Foundation to prepare a planning grant application for PSRO which will be submitted to the secretary of HEW shortly.

Other provisions

Another provision of the newly-passed law relates to the prevailing charge level determinations for fiscal 1976. Determinations under the economic index enacted in 1972 by PL 92-603 would be raised to the level of the prevailing charge level recognized for the fiscal year ending June 30, 1975 if the prevailing level for fiscal 1976 (in the case of a similar physician service in the same locality) would otherwise be lower than that recognized as of June 30, 1975.
The bill extends the authority of the secretary of HEW to waive the requirement for 24-hour nursing service by registered professional nursing staff for certain hospitals to Jan 1, 1979.
The law repeals the provision requiring coordination between Medicare and the Federal Employees Health Benefits program (required by Jan 1, 1976 as a prerequisite to receiving Medicare by federal beneficiaries).
Technical problems presently preventing Part B premium changes based on changes in cash benefits paid under Social Security were eliminated by the bill.
Skilled nursing facilities will be required by the new law to meet the provisions of the 1973 revised Life Safety Code of the National Fire Protection Association as one of the conditions of participation in Medicare and Medicaid.
Additional provisions relate to grants for experiments and demonstration projects under Medicare, Medicaid utilization review, food stamp distribution, and state consent to suits as part of the Medicaid plan.

NEWS

FTC challenges ban on advertising

In response to the recent Federal Trade Commission action against the American Medical Association alleging that the ban on advertising by physicians constitutes illegal restraint on competition, the Texas Medical Association said the action places the AMA and other professional organizations in an untenable position with regard to long standing principles.

According to the statement prepared by the association's Board of Councilors, there are sound and logical reasons for the prohibition against a physician's soliciting patients. "These principles protect the public from the advertiser or salesman of medical care by establishing an easily discernible and generally recognized distinction between cultists and the ethical physician."

TMA support was pledged to the AMA in its efforts to uphold the principles of medical ethics which have both a historical and traditional basis. The statement concluded, "It is difficult to understand why a government agency would challenge these professional standards which have, over the years, provided the consuming public with a reliable method of distinguishing ethical physicians from the unscientific and unprofessional practitioner.

Hearings on the complaint are scheduled to begin Feb 9 before an administrative law judge.

"I am on the verge of something, but I don't know what."

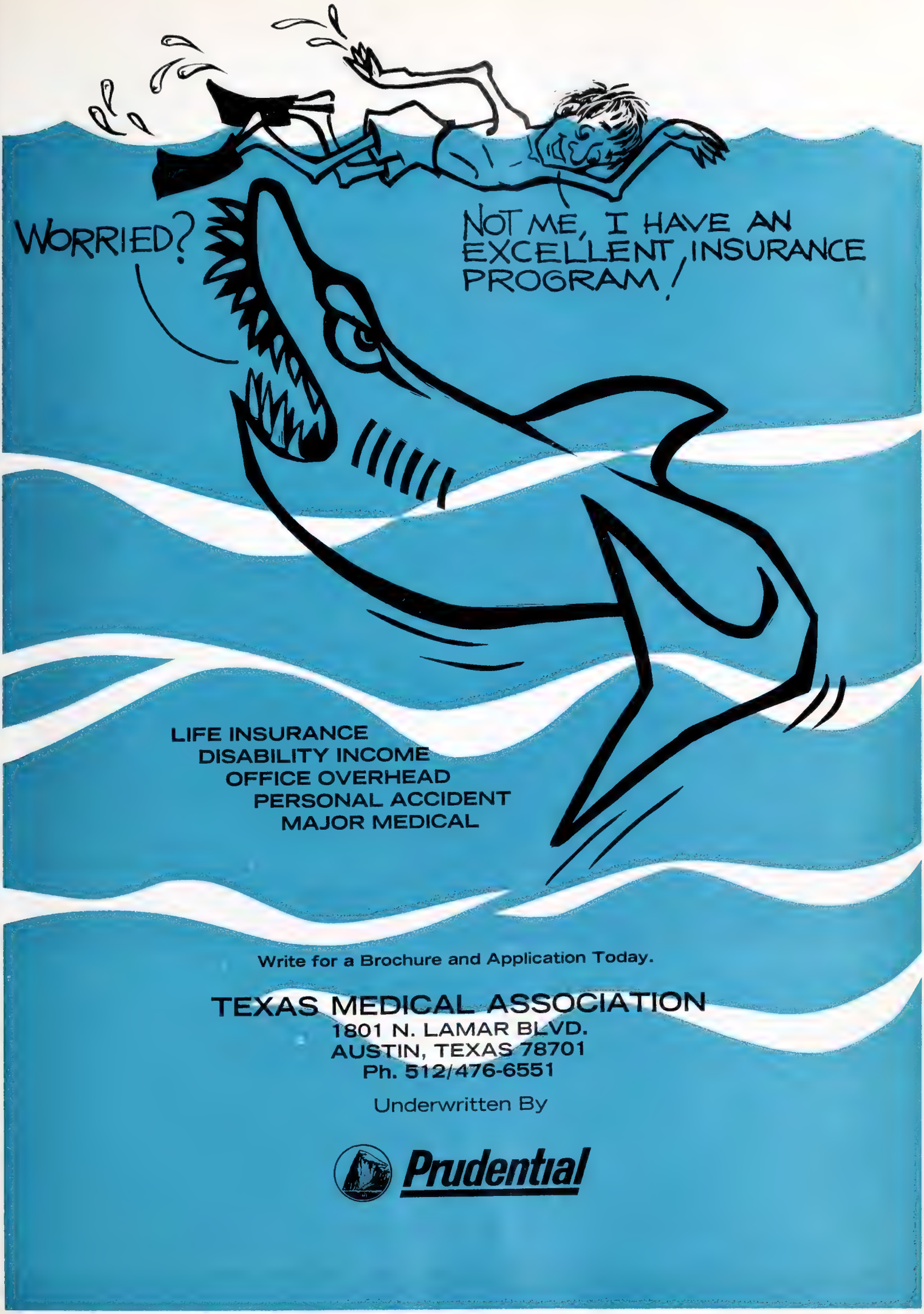
Texas delegation attains objectives at AMA convention

Administrative rule-making by the US Department of Health, Education and Welfare and other governmental agencies, proposals for national health insurance, economic restraints imposed upon physicians by federal health programs, professional liability insurance, and restructuring the national organization were among the major issues at the 1975 Clinical Convention of the American Medical Association in Honolulu Nov 30-Dec 3.

The Texas delegation was successful in attaining objectives which it sought on most national issues. Acting favorably upon a resolution which had been previously adopted by the Texas Medical Association, the AMA House of Delegates reaffirmed support of the principle curtailing administrative rule-making by publication in the *Federal Register*. The AMA house also recorded its enthusiastic approval and support of HR 10301, now being considered by Congress, which would amend the Administrative Procedures Act. That bill would endeavor to end or correct rule-making abuses by federal agencies.

The Texas resolution pointed out that there have been flagrant regulatory abuses of the Administrative Procedures Act. Governmental agencies have issued regulations in contradiction of clear statutory language in order to assume positions of broader power. In some cases, they have ignored mandates of legislation enacted by Congress.

Texas delegates cited several instances of rule-making abuse. They include HEW's utilization review regulations, which were challenged by the AMA in a lawsuit and which establish an economic index for reimbursement of physicians under Medicare. HEW did not publish the index,



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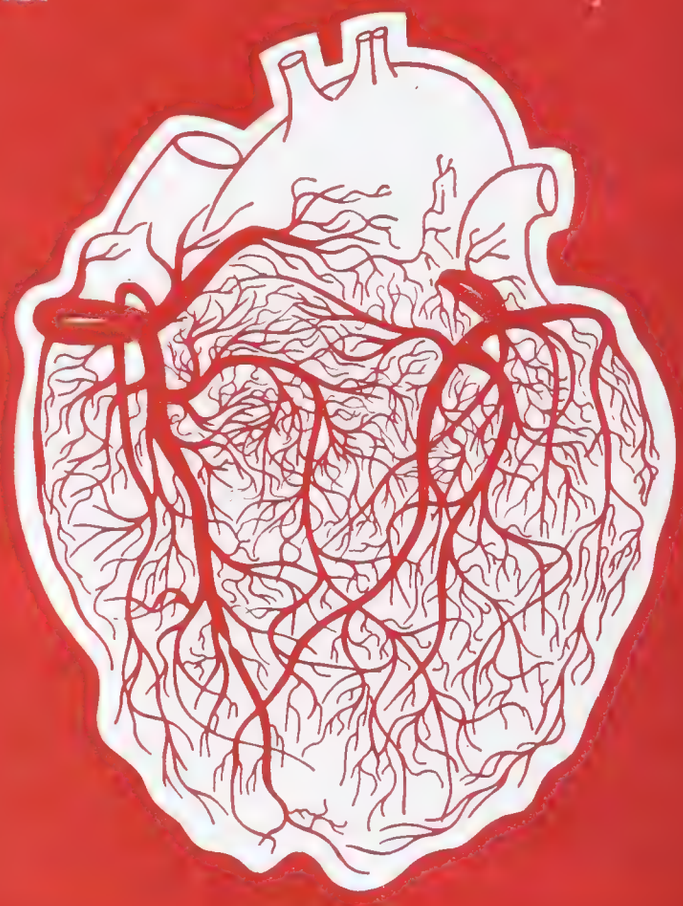

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- **To provide prophylaxis against anginal attacks often caused by unavoidable everyday stress.**
- **To reduce the frequency and severity of angina pectoris attacks. (Not intended to abort the acute episode.)**

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Possibly" effective: When taken by the oral route, Isordil is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

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thereby denying the AMA and other interested parties adequate time to comment.

The Texas resolution placed the AMA on record in support of those features in HR 10301 and other bills pending before Congress which would provide more adequate time for comment on proposed rules published in the *Federal Register*. The legislation would restrict the authority for the issuance of intermediary letters, transmittal letters, and similar communications, and would make substantive policy pronouncements subject to publication in the *Federal Register* as proposed rules. The bill would require agencies to provide reasons for extension requests, for adopting or disregarding comments received on proposed regulations, or for substantially modifying the proposed regulations. HR 10301 would require the republication of any proposed rule which has been substantially modified from what was previously published.

The Texas resolution also asked the AMA to appeal to state and county medical societies and all physicians to lend active support to those desirable provisions in legislation before Congress which would correct rule-making abuses by federal agencies.

Favorable consideration also was given to another Texas resolution, calling for review of the feasibility and potential uses of an embossed, plastic membership card for AMA members.

The plastic card would make possible rapid registration for physicians at medical meetings and would represent a computerized recording system for continuing medical education credit.

The resolution was introduced originally by the Texas delegation at the 1975 annual convention at Atlantic City, and was referred to the AMA Board of Trustees.

The Board of Trustees reported that it is presently reviewing and planning extensive improvements in the physicians' records and computer systems to accommodate a broader informational base and more rapid responses to members. Embossed, plastic membership cards are being given prime consideration as a vital part of new and improved systems which are planned for completion in 1977. At that time, if financially feasible, pilot projects will be implemented.

Continental breakfasts popular at Annual Session

Thirteen Continental Breakfast Programs will be featured during the 1976 Texas Medical Association Annual Session upcoming in Dallas May 6-9. The presentations, which encourage participation by those who attend, focus on subjects which are of interest to the general practitioner, as well as to the specialist.

The breakfasts, during which coffee and refreshments will be served, will allow time for attendees to meet and talk with featured guest speakers. Afterward, each speaker will give a 15-20 minute talk, followed by a question and answer period.

Six programs will be offered Friday morning of the session. Topics include "The Recognition and Management of Chronic Pain," "The Controversy Over the Treatment of Operable Breast Carcinoma," "The Prevention of Hyperglycemia in Diabetes and its Clinical Significance," "Diagnostic and Therapeutic Approaches to a Child with Urinary Tract Infection," and "Determinants of Effectiveness and Clinical Usage of Diuretic Drugs."

Saturday morning's selections include "Smoking and Cancer," "Premenstrual Tension," "Dos and Don'ts With Antibiotics," "What Everybody

NEWS

Should Know About Acute Diarrhea," "Role of Skeletal Imaging in Medical Diagnosis Compared With Radiography," "Drug Therapy of Rheumatoid Arthritis," and "Glaucoma."

Speakers include medical experts in these fields. They will come from all parts of the country to participate in the annual session program.

Tickets to the Continental Breakfast presentations are $1.50 per presentation and are available through preregistration and during the session.

Baylor establishes population program

In an effort to explore and confront the effects of burgeoning world population and diminishing resources on the quality of human life in the future, Baylor College of Medicine has established the first multidisciplinary population program based in an American medical school.

Dr. Abel J. Leader, clinical professor of urology at Baylor, is the newly appointed director of the program.

The Baylor Population Program is combining the research, teaching, and clinical resources of Baylor's departments of cell biology, obstetrics and gynecology, and division of urology with the Planned Parenthood Center of Houston's 40 years of experience in family planning education and service.

With a newly adopted five-year plan, the population program anticipates expansion into: (1) multidisciplinary biological research to aid in the development of male and female contraceptives; (2) increasing the availability of family planning services in the Houston/Gulf Coast region; (3) international training programs in family planning for Central and South American physicians; (4) research programs in large animal breeding for food production; (5) continuing education for physicians, nurses, and paramedical personnel in human sexuality and family planning; and (6) establishment of a regional center for the treatment of infertility.

JCAH to accredit ambulatory programs

A new program to accredit organized settings for ambulatory health care is being developed by the Joint Commission on Accreditation of Hospitals (JCAH). This Accreditation Council for Ambulatory Health Care (AC/AHC) will conduct a voluntary accreditation program to promote and identify ambulatory health care programs and services of high quality.

The developmental stages of AC/AHC are being supported in part by a $496,955 grant from the W.K. Kellogg Foundation of Battle Creek, Mich. The three-year grant extends to April 30, 1978, by which time the council expects to be self-supporting.

The new council will recommend to the JCAH Board of Commissioners standards for optimal achievable quality of ambulatory health care programs, and will conduct on-site surveys to measure compliance with the standards by those programs that volunteer for the accreditation process.

"Every time you get a group of doctors together they talk medicine."

Conference highlights available in cassettes

Highlights from the 1976 Texas Medical Association's Conference on Legislation and Medical Service held in Austin in January will soon be available in cassette tape form from TMA's Department of Communication.

The day-long meeting covered many topics of current concern to Texas physicians. Guest speakers included Richard L. Lesher, PhD, of Washington, DC, president of the Chamber of Commerce of the United States; Rep J. J. Pickle of Austin, a member of the House Ways and Means Committee; and Dr. Tom E. Nesbitt of Nashville, speaker of the AMA House of Delegates.

More details on this informative tape may be obtained from the TMA Department of Communication, 1801 N Lamar Blvd, Austin 78701.

Copies of a 90-minute cassette highlighting the TMA fall conference, "1975 Update on Medical Issues" are still available from the Department of Communication for $3.50.

Polio advisory issued for travelers to Mexico

Travelers to Mexico are advised to update their polio immunizations according to the Bureau of Communicable Disease Services of the Texas Department of Health Resources.

The bureau first issued a polio advisory in August, 1975 following the report of a number of suspected cases of clinical paralytic polio in northern Mexico.

According to the bureau, all children from the age of two months should have complete protection. If the polio series has been completed and a trip to Mexico is anticipated, a booster should be obtained. While almost all adults have been adequately immunized, the bureau recommends a single polio booster if travel into a polio epidemic area is imperative.

One case of paralytic polio was confirmed in Texas in 1975. This ended a period of two years and eight months during which Texas was polio-free. The epidemiological investigators revealed that the child involved had direct contact with the culminating outbreak in Chihuahua.

Rural education board awarding loans to medical students

The State Rural Medical Education Board has awarded its first loans to medical students.The program was made possible by the Legislature which in its 64th session appropriated $100,000 for loans in 1975-76 and a similar amount for 1976-77.

The board, chaired by Dr. Sam A. Nixon, Floresville, can award up to $6,000-$7,000 to each medical student for educational and living expenses. The interest rate is 5%. For those physicians who practice five years in a rural area, the loans are forgiven and become grants.

The board has agreed to give first priority to Texas residents who are enrolled in medical schools in the state. Second priority will be given to Texas residents who are enrolled in other medical schools in the United States. Students in foreign medical schools are not eligible at this time.

In submitting requests for funds, the student must express a desire to practice medicine in a rural area or community in Texas. The medical school must provide a notarized copy of the student's application. In addition, the State Rural Medical Education Board requires a statement of the student's finances—income, expenses, and needs.

Requests for loans should be sent to J. C. Randolph, State Rural Medical Education Board, Southwest Tower Building, Suite 900, 211 E 7th St, Austin 78701.

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Indications: Based on a review of PREMARIN Tablets by the National Academy of Sciences-National Research Council and/or other information, FDA has classified the indications for use as follows:
Effective: As replacement therapy for naturally occurring or surgically induced estrogen deficiency states associated with: the climacteric, including the menopausal syndrome and postmenopause; senile vaginitis and kraurosis vulvae, with or without pruritus.
"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.
Warnings: Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.
Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Pre-existing uterine fibromyomata may increase in size while using estrogens; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.
Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
nausea, vomiting, anorexia
gastrointestinal symptoms such as abdominal cramps and bloating
breakthrough bleeding, spotting, unusually heavy withdrawal bleeding (See DOSAGE AND ADMINISTRATION)
breast tenderness and enlargement
reactivation of endometriosis
possible diminution of lactation when given immediately postpartum
loss of libido and gynecomastia in males
edema
aggravation of migraine headaches
change in body weight (increase, decrease)
headache
allergic rash
hepatic cutaneous porphyria becoming manifest
Dosage and Administration: PREMARIN should be administered cyclically (3 weeks of daily estrogen and 1 week off) for all indications except selected cases of carcinoma and prevention of postpartum breast engorgement.

Menopausal Syndrome—1.25 mg. daily, cyclically. Adjust dosage upward or downward according to severity of symptoms and response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom-free.

Postmenopause—as a protective measure against estrogen deficiency-induced degenerative changes (*e.g.* osteoporosis, atrophic vaginitis, kraurosis vulvae)—0.3 mg. to 1.25 mg. daily and cyclically. Adjust dosage to lowest effective level.

Osteoporosis (to retard progression)—usual dosage 1.25 mg. daily and cyclically.

Senile Vaginitis, Kraurosis Vulvae with or without Pruritus—0.3 mg. to 1.25 mg. or more daily, depending upon the tissue response of the individual patient. Administer cyclically.
How Supplied: PREMARIN (Conjugated Estrogens Tablets, U.S.P.)

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No. 868—Each *green* tablet contains 0.3 mg., in bottles of 100 and 1,000. **7352**

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NEWS

Health resources assumes regional medical program

The Texas Regional Medical Program Inc Board of Trustees and the Board of the Texas Department of Health Resources recently approved several provisions necessary for the Regional Medical Program grantee change from TRMP to TDHR.

The programs, property, and staff of RMPT were transferred to TDHR effective Jan 1.

TRMP contracts will be cancelled and contracts to be continued will be renegotiated under TDHR. TDHR will accept the Regional Advisory Group membership, officers, bylaws, and operating procedures as presently constituted. TDHR will confirm or select a full-time director for RMPT.

The Board of Health Resources and the TRMP Board of Trustees will jointly adopt a resolution regarding the orderly closedown of remaining RMPT activity after the formal transfer is complete.

Notice distributed regarding drug interaction

The Texas Department of Health Resources has distributed a notice in regard to potential rifampin interaction with other drugs.

According to the statement, information has accumulated over the past several years which suggests that rifampin is capable of causing increased dose requirements of a number of other drugs. The list of agents which might be affected by this interaction with rifampin includes birth control pills, coumarin-type anticoagulants, corticosteroids, and methadone. This effect can be clinically significant.

The statement continues that the mechanism by which rifampin produces this effect is assumed to be an increase in the smooth endoplasmic reticulum of the hepatocytes with induction of drug-catabolizing microsomal enzymes. This decreases the half-life and produces an increased dose requirement of these agents. With such a basic mechanism, drugs other than the ones listed above could also be affected by rifampin in a similar way.

The Department of Health Resources urges the clinician to keep potential drug interactions in mind when assessing the individual patient.

New drugs introduced in US

Some 37 new drugs were introduced in the United States during 1973 and 1974, "an encouraging improvement" in comparison with the previous two-year period, according to a report in the Nov 17 issue of the *Journal of the American Medical Association.*

The number of new drugs for 1971 and 1972 was 25, Paul de Haen of New York City said, in his biennial report on new drug introduction.

"Some represent real advances in therapy; others enable the physician to vary his therapeutic regimen," de Haen stated. He pointed out that of the 37 new products marketed, 25 came from American research laboratories. Virtually all were the result of research by the manufacturers; only two came from university research groups.

"I'd like an appointment to see 'God's gift to women.' "

State initiates nutrition project

The Texas Department of Health Resources has embarked on an enlarged program of bringing better health to babies, small children, and new and expectant mothers through proper nutrition.

The Women, Infants and Children (WIC) Program is operating in 24 locations within the state with improved nutrition and health as its goal. An additional five other local programs will be implemented soon.

The WIC Program, sponsored by the U S Department of Agriculture, is administered in Texas through Dr. Connie R. Yerwood's Maternal and Child Health Division in the Department of Health Resources.

For the current year, Texas is operating under a $20.8 million budget with an authorized case load of 75,168 persons a month. Approximately 60 to 65% of those receiving supplemental food are located in the Rio Grande Valley.

AMA sets deadline for Sheen Award

The American Medical Association has set a Feb 15 deadline for the 1976 Dr. Rodman E. Sheen and Thomas G. Sheen Award.

First presented in 1968, the Sheen Award is presented annually to an American physician or physicians in recognition of their outstanding contributions to medicine. The award consists of a $10,000 cash prize and a commemorative plaque. Among the past recipients is Dr. R. Lee Clark of Houston.

Candidates must be U S citizens and must possess an MD degree. The award can recognize either a single achievement or an accumulated career of excellence. The outstanding contributions to medicine for which Sheen Award recognition is proposed need not have occurred in the United States.

Anyone interested in nominating a Texas physician for this award should contact Dr. J. E. Miller, chairman, Awards Committee, Texas Delegation to the American Medical Association, 1801 N Lamar Blvd, Austin 78701.

NEWS

Senior resident workshops focus on practice management

The Texas Medical Association and the American Medical Association will co-sponsor two practice management workshops for senior residents, March 16-17 in Houston at the Marriott Motor Hotel and March 23-24 in Dallas at the Hyatt House.

"Establishing Yourself in Medical Practice" is designed for senior residents who will be entering the private practice of medicine within 18 months. Topics for each two-day workshop include personnel problems, patient flow techniques, physical aspects of the medical office, clinical and financial paperwork, practice setting, and legal aspects of the practice of medicine. The workshops will be presented by the nationally known medical consulting firm, Conomikes Associates.

Registration for each workshop is limited to 30 residents. The registration fee is $95 for residents who are members of a county medical society and TMA, and $125 for residents who are not members of any component of organized medicine.

Registration requests and inquiries should be directed to Paul D. Gray, TMA, 1801 N Lamar Blvd, Austin 78701.

AMA sells magazine

The American Medical Association has announced the sale of *Today's Health*, its 52-year-old monthly consumer magazine, to Hospital Media, Inc, of Nashville, Tenn.

NEWS

Hospital Media was formed last May by its president, Frederic Gregg, Jr., and 11 other Nashville residents, four of them physicians. Their corporate objective was to explore media opportunities in the health care field.

"We are going to do some test-marketing soon," said Gregg, "backed with radio and TV promotion to determine the potential for single copy sales. We will continue subscription sales, to the public and to physicians for reception room display. We will continue to carry advertising."

Today's Health, originally published by the AMA as *Hygeia*, has a current paid circulation of approximately 300,000 with an additional 165,000 unpaid subscriptions going to AMA members for display in physician reception rooms.

TMA staff reorganizes

Part of a reorganization plan of the Texas Medical Association headquarters staff became effective Jan 1 with the activation of three major divisions.

Donald M. Anderson has been designated to serve as director of the Socio-economics Division. The Management Division will be headed by Robert G. Mickey. A director has not yet been named for the Medical Education and Scientific Advancement Division. In the interim, activities within this division will be supervised by C. Lincoln Williston, TMA executive director.

The reorganization plan was evolved from numerous meetings and discussions over a two-year period. Further staff organizational patterns will be guided by policy actions of the association.

Manufacturers change name

The Texas Manufacturers Association (TMA) has changed its name to the Texas Association of Business (TAB) effective Jan 1.

This change should help reduce some confusion about this organization and the Texas Medical Association, at least when the initials are used by the media and others.

Liability costs drive fees up

Patients are feeling the effects of the California professional liability crisis through higher medical bills according to a survey by the California Medical Association (CMA).

The survey indicates that physicians' fees rose 6.7% in the state during the first six months of 1975 compared with the nationwide fee increase of 5.9%.

In northern California, where premiums increased as much as 375% beginning May 1, fees rose an average of 12%. CMA predicts other counties soon will experience fee increases similar to those in northern California as premiums rise at about the same magnitude in other parts of the state.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1 Year Ended 12/31/75	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+20.2%	−33.0%	− 6.2%	1.6%
Loomis-Sayles Mutual Fund	+21.0%	−21.0%	− 3.7%	3.5%
Mercantile Bank Equity Fund	+30.0%	−35.8%	−16.5%	4.0%
Mercantile Bank Fixed Income Fund	+ 4.2%	−13.5%	− 8.6%	8.1%
T Rowe Price Growth Stock Fund	+33.2%	−34.1%	− 1.9%	1.3%
T Rowe Price New Income Fund	+ 2.8%	N/A	N/A	8.2%
Stein Roe & Farnham Balanced Fund	+24.1%	−24.9%	+ 4.1%	3.4%
Standard & Poor 500 Stock Average	+31.6%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+38.3%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

WASHINGTON: MEDICARE AMENDMENTS. The President has signed HR 10284, the 1975 Medicare Amendments. One amendment to the bill provides for the redesignation of a state into single professional standards review organization (PSRO) areas under certain conditions. This amendment, which would apply to Texas, was authored by Sen Lloyd Bentsen (D-Tex). A major item of interest of the newly-passed law would raise determinations under the economic index enacted in 1972 by PL 92-603 to the level of the prevailing charge level recognized for the fiscal year ending June 30, 1975, if the prevailing level for fiscal 1976 would otherwise be lower than that recognized as of June 30, 1975. For more details on the bill, see news article, p 6.

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: STATE HEALTH ADVISORY MEMBERS. Gov Dolph Briscoe has appointed several new members to the State Health Advisory Committee. They are Mrs. Tweltha B. Davis of Houston replacing John E. Gaston of Henderson; Jack R. Northrop of Albany replacing Clifford F. Milner of Amarillo; Dr. William H. Mack of Houston replacing Dr. Robert H. Nobels of Denton; Dr. Robert L. M. Hilliard of San Antonio replacing Curt W. Reimann of Austin; Dr. Mackin Jones of Bryan replacing Dr. Vance Terrell of Stephenville; Albert W. Hartman, III, of San Antonio replacing Mrs. Earl W. Tigert of Lone Star; and Dr. Joseph W. Bitner of Edna replacing Rev Mark B. Williams of Plainview.

AUSTIN: GUBERNATORIAL APPOINTMENTS. Rep Tim Von Dohlen has been appointed chairman and Sen Ray Farabee has been appointed vice chairman of the newly created Coordinating Commission for State Health and Welfare Services. Dr. Lloyd R. Hershberger of San Angelo has been appointed to a six-year term on the Radiation Advisory Board. Nine members recently appointed to the new Policy Board for Services to the Visually Handicapped included a physician, Dr. Whitney G. Sampson, president of the Texas Ophthalmological Association.

AUSTIN: ADVISORY COMMITTEE NAMED. An Advisory Committee on Nursing Home Affairs has been named by the Texas Department of Health Resources according to Dr. Robert Moreton of Houston, chairman. The 13-member committee is to promote a more effective liaison between the nursing home industry and the TDHR. Physician members of the committee include Dr. Edward J. Lefeber of Galveston, Dr. Henry H. Moore of Seguin, and Dr. W. G. Millington of Nixon. Also appointed to the committee were three nursing home administrators, one registered nurse, one dietitian, one pharmacist, one medical record specialist, and two members of the public.

WASHINGTON: COST OF FEHB PROGRAMS AIRED. Dr. William C. Felch, member of the American Medical Association's Council on Legislation, recently testified before the Subcommittee on Retirement and Employee Benefits of the House

Post Office and Civil Service Committee. The committee, chaired by Congressman Richard C. White of El Paso, was holding hearings on the Federal Employee Health Benefit Program. Dr. Felch testified that the three primary causes of the recent rise in physician fees were: (1) the lingering effects of the Economic Stabilization Program; (2) economy-wide inflation; and (3) professional liability expenses. Dr. Felch emphasized that physicians' long-run prices have paralleled price changes elsewhere in the economy and are affected by inflation as is every other item in the economy. Dr. Felch also revealed that the AMA recently authorized the creation of a commission on the cost of medical care which will include top level representatives of health care providers and of the public so as to reflect the broad spectrum in interest in health care.

WASHINGTON: HEALTH EXPENDITURES. HEW recently announced that of the $104.2 billion spent on medical care in the year ending June 30, 1974, $40.9 billion (39%) was spent on hospital care; $19 billion (18%) on physicians' services; $9.7 billion (9%) on drugs; $7.5 billion (7%) on nursing home care; $6.2 billion (6%) on dental services; $4.4 billion (4%) on construction; $2.7 billion (3%) on research; and $13.8 (13%) on all other expenditures.

WASHINGTON: NHI SEEN AS 1976 ISSUE. The AFL-CIO appears convinced that national health insurance can be built into a significant campaign issue in 1976 and is bending its efforts in this direction, rather than attempting to move legislation through Congress. (Note labor's efforts to promote the significance of a recent poll taken by Sen Edward Kennedy (D-Mass) which ostensibly shows that health care is first on the Massachusetts' voters' priorities for added federal expenditures. All other polls to date have shown NHI to be a minor public concern.)

WASHINGTON: NEW CONSTRUCTION REGULATIONS. Recently published regulations governing grants, loans, and loan guarantees under the Hill-Burton Hospital Construction and Modernization Program require recipients to provide "a reasonable volume" of care to persons unable to pay. New regulations require that they post notices that care is available without charge to medically indigent. Notices must be in appropriate language advising low income patients that they may apply for free care. The notice must instruct persons where to apply for such care and also give the address of the state Hill-Burton agency. The notice may indicate that the obligation is limited to a specified volume.

AMERICAN COLLEGE OF PHYSICIANS, AIR FORCE REGIONAL MEETING

Specialists in internal medicine and related medical fields will hold a scientific meeting Feb 23-25, 1976, at San Antonio. The Air Force Regional Meeting of the American College of Physicians is designed to bring physicians up-to-date on late developments in the field of internal medicine. It is one of more than 30 such sessions held each year throughout the United States and Canada by the 30,000-member medical specialty society. Physicians who attend the meeting are eligible for credit toward the American Medical Association Physician's Recognition Award in Category I.

Contact: Col. Dana G King, Jr, USAF, MC, Headquarters SGPC, Forrestal Building, Washington, DC 20314.

DISTRICT I MEDICAL SOCIETY

The District I Medical Society of the Texas Medical Association will meet Saturday, Feb 7, 1976, at the Downtown Holiday Inn in El Paso. The program is entitled Pediatrics—A Mini-Symposium—1976, and it will be presented by the Department of Pediatrics, Baylor College of Medicine. Topics to be discussed include clinical assessment of the child with proteinuria, coagulation diseases in infants and children, effects of maternal drugs on the newborn, new antimicrobial agents, asymptomatic hematuria in child, medical care of the low birthweight infant, perinatal infections, outlook for a child with cancer, and scoliosis screening. The faculty for the program are Drs. John M Falletta, Larry H Taber, Reba Michels Hill, and L Leighton Hill, all of Baylor.

Contact: Dr. Laurance N Nickey, Program Chmn, 1301 Montana Ave, El Paso 79902.

INTERNATIONAL MEDICAL ASSEMBLY

The 40th International Medical Assembly will be held Feb 26-27, 1976, in San Antonio. Highlighting the meeting will be a luncheon address by Dr. Carl Hall, President, American Academy of Family Physicians. Other presentations will touch on pain, its evaluation and management; traveler's diarrhea; world population trends; surgical treatment of coronary heart disease, results of myocardial revascularization in 5,000 patients; hyperlipoproteinemia, its clinical significance; inflammatory bowel disease; new concepts in sudden death from myocardial infarction; and rehabilitation of the six-million-dollar-man, a discussion of patient selection for total joint replacement. A post-convention trip to Spain will depart San Antonio Feb 28 and return Mar 7.

Contact: SE Cockrell, Jr, Exec Dir, 202 W French Place, Box 12678, San Antonio 78212.

COMING MEETINGS

CURRENT NATIONAL MEETINGS

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION, INC, Boston Statler Hilton, 20th annual institute, Feb 3-4, 1976; 33rd annual conference, Feb 4-7, 1976. Institute program meets criteria for 14 hours, Category I, AMA Physician's Recognition Award. Conference formats include symposia, section meetings, workshops, films and videotape sessions. Among subjects covered: alcoholism, countertransference, couples group therapy, dream interpretation, drug abusers, existential analysis, family therapy, multi family group therapy, racial and ethnic differences, schizophrenia, transactional analysis, women, others. Contact: 1865 Broadway, 12th Floor, New York 10023.

AMERICAN COLLEGE OF CARDIOLOGY, New Orleans, Feb 23-26, 1976. 25th annual scientific session. No registration fee for membership; nonmembers, $100. 37½ hours, Category I, AMA Physician's Recognition Award. Ladies program. Scientific program offers time management seminar, self-assessment classroom, cardiac clinics; presentations on effective reading—a lifetime technique, stress testing, surgical considerations and indications for myocardial revascularization, drug therapy of congestive heart failure, pediatric echocardiography, cardiomyopathies and click murmur syndrome, others. Contact: 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Americana Hotel, Bal Harbour/Miami Beach, Fla, Feb 29-Mar 5, 1976. Annual meeting and scientific assembly. Faculty headed by Drs. Michael DeBakey, Eliot Corday, John Laragh, R Lee Clark, George Crile, Jr, Louis Weinstein, Owen Wangensteen. Key subjects: cancer, cardiovascular disease, anticoagulants, pacemakers, pain, infectious diseases, hypertension, diabetes, pulmonary disease, nutrition, obstetrics-gynecology, cryotherapy, plastic surgery, federal involvement, others. Acceptable for 40 hours, Category I, AMA Physician's Recognition Award; 30 hours AAFP elective. Contact: Dr. John Bellows, ASCMS Dir, 30 N Michigan Ave, Chicago 60602.

For other courses and symposiums, see Continuing Education Courses, pp 31-35.

Calendar of Listings

■ Denotes Texas Meetings

FEBRUARY

ACADEMY OF PSYCHOLOGISTS IN MARITAL AND FAMILY THERAPY, Israel/Tel Aviv, Feb 23-26, 1976. International Congress Dept, 1140 Ave of the Americas, New York 10036.

AMERICAN COLLEGE OF CARDIOLOGY, New Orleans, Feb 23-26, 1976. William D Nelligan, Exec Off, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF PHYSICIANS, Gainesville, Fla, Feb 18-20, 1976. Registrar, Postgraduate Courses, ACP, 4200 Pine St, Philadelphia 19104.

■ AMERICAN COLLEGE OF PHYSICIANS, AIR FORCE REGIONAL MEETING, San Antonio, Feb 23-25, 1976. Col. Dana G King, Jr, USAF, MC, Headquarters SGPC, Forrestal Building, Washington, DC 20314.

AMERICAN COLLEGE OF PHYSICIANS, Wichita, Kan, Feb 27, 1976. Dr. John L Morgan, 919 W 12th Ave, Emporia, Kan 66801.

AMERICAN COLLEGE OF PHYSICIANS, San Francisco, Feb 7-8, 1976. Dr. Maurice Fox, 300 Homer Ave, Palo Alto, Calif 94301.

AMERICAN COLLEGE OF PHYSICIANS, Shreveport, La, Feb 9-11, 1976. 4200 Pine St, Philadelphia 19104.

AMERICAN GROUP PSYCHOTHERAPY ASSOCIATION, Boston, Feb 3-7, 1976. Ms. M Block, Admn Sec, 1865 Broadway, 12th Floor, New York 10023.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Bal Harbour, Fla, Feb 29-Mar 5, 1976. Dr. John G Bellows, Dir, 30 N Michigan Ave, Chicago 60602.

■ DISTRICT I MEDICAL SOCIETY OF THE TEXAS MEDICAL ASSOCIATION, El Paso, Feb 7, 1976. Dr. Laurance N Nickey, Sec-Treas, 1515 N Oregon, El Paso 79902.

■ INTERNATIONAL MEDICAL ASSEMBLY OF SOUTHWEST TEXAS, San Antonio, Feb 26-27, 1976. SE Cockrell, Jr, Exec Off, 202 W French Place, San Antonio 78212.

KOCH CENTENNIAL SYMPOSIUM, Baltimore, Feb 20-21, 1976. Dr. David Glasser, Baltimore City Health Dept, Room C-231, Baltimore 21202.

NOAH WORCESTER DERMATOLOGICAL SOCIETY, Hollywood, Fla, Feb 28-Mar 6, 1976. Dr. H Plotnick, Sec-Treas, 1150 David Whitney Bldg, Detroit 48226.

SOCIETY FOR CONTEMPORARY OPHTHALMOLOGY, Miami Beach, Fla, Feb 29-Mar 5, 1976. Dr. John Bellows, Exec Off, 30 N Michigan Ave, Chicago 60602.

■ SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Houston, Feb 18-20, 1976. Mrs. Floy Bleker, Exec Sec, 4300 N Lamar Blvd, Austin 78756.

SOUTHEASTERN SURGICAL CONGRESS, New Orleans, Feb 8-12, 1976. Dr. AH Letton, Sec-Dir, 315 Boulevard NE, Suite 500, Atlanta 30312.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Fort Worth, Feb 29-Mar 3, 1976. Robert E Monroe, Exec Sec-Treas, 1117 W 42nd, Austin 78756.

■ TITUS HARRIS SOCIETY, Galveston, Feb 19-21, 1976. Dr. EA Zein-Eldin, Sec-Treas, Suite 620, 200 University Blvd, Galveston 77550.

MARCH

ALPHA EPSILON DELTA, Tuscaloosa, Ala, Mar 31-Apr 3, 1976. 7 Brookside Circle, Bronxville, NY 10708.

AMERICAN ACADEMY OF ALLERGY, San Juan, PR, Mar 6-10, 1976. JO Kelley, Exec Off, 225 E Michigan St, Milwaukee 53202.

AMERICAN ASSOCIATION OF PATHOLOGISTS & BACTERIOLOGISTS, Boston, Mar 20-23, 1976. 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF PHYSICIANS, Honolulu, Mar 9-10, 1976. Dr. Bernard WD Fong, 97 Dowsett Ave, Honolulu 96817.

AMERICAN COLLEGE OF PHYSICIANS, Philadelphia, Mar 1-5, 1976. 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF PHYSICIANS, New York, Mar 10, 1976. Dr. Felix E DeMartini, 161 Fort Washington Ave, New York 10032.

AMERICAN COLLEGE OF PHYSICIANS, Palm Springs, Calif, Mar 4-7, 1976. Dr. Varner J Johns, Jr, Loma Linda Medical Center, Loma Linda, Calif 92354.

AMERICAN COLLEGE OF PHYSICIANS, St. Louis, Mar 5-6, 1976. Dr. Thomas W Burns, University of Missouri School of Medicine, Columbia, Mo 65201.

AMERICAN COLLEGE OF PHYSICIANS, Salt Lake City, Mar 5, 1976. Dr. Donald E Smith, 2914 Millicent Dr, Salt Lake City 84108.

AMERICAN COLLEGE OF PHYSICIANS, Myrtle Beach, SC, Mar 5-7, 1976. Dr. Roy A Howell, Jr, 210 Market St, Bennettsville, SC 29512.

AMERICAN DIOPTER & DECIBEL SOCIETY, San Diego, Calif, Mar 14-21, 1976. Dr. Albert C Esposito, Exec Dir, Suite 100, Medical Center Bldg, 420-422 11th St, Huntington, WVa 25701.

AMERICAN MEDICAL STUDENT ASSOCIATION, New Orleans, Mar 5-7, 1976. Louis R Giancola, Exec Dir, 1400 Hicks Rd, Rolling Meadows, Ill 60008.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Seattle, Mar 18-19, 1976. 1718 Gallagher Rd, Norristown, Pa 19410.

ASPEN RADIOLOGY CONFERENCE, Aspen, Colo, Mar 1-5, 1976. Registration Division, 1818 Gaylord St, Denver 80206.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, Atlanta, Mar 21-25, 1976. 1901 N Ft Myer Dr, Suite 602, Arlington, Va 22209.

INTERNATIONAL ACADEMY OF PROCTOLOGY, India, Mar 17-Apr 4, 1976. Exec Offices, 147-41 Sanford Ave, Flushing, NY 11355.

NEVADA TUMOR REGISTRY OF THE NEVADA CANCER CONTROL INSTITUTE, Las Vegas, Nev, Mar 11-12, 1976. Ms. Irene S Peacock, 1800 W Charleston Blvd, Las Vegas, Nev 89102.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 29-Apr 1, 1976. 1430 Tulane Ave, New Orleans, La 70112.

■ SOUTHWESTERN CONFERENCE ON DISEASES IN NATURE TRANSMISSIBLE TO MAN, College Station, Mar 15-16, 1976. Dr. Warren Kilpatrick, Office of Continuing Education, College of Veterinary Medicine, Texas A&M University, College Station 77843.

■ TEXAS ASSOCIATION OF OBSTETRICIANS & GYNECOLOGISTS, McAllen, Mar 11-13, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS RADIOLOGICAL SOCIETY, Houston, Mar 4-6, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

■ WESTERN INSTITUTE OF EPILEPSY, Dallas, Mar 26-27, 1976. Box 12034, Dallas 75225.

APRIL

AMERICAN ACADEMY OF NEUROLOGY, Toronto, Apr 26-May 1, 1976. Stanley A Nelson, Exec Off, 4015 W 65th St, Suite 302A, Minneapolis 55435.

AMERICAN ACADEMY OF PEDIATRICS, Philadelphia, Apr 12-15, 1976. Dr. Robert G Frazier, 1801 Hinman Ave, Evanston, Ill 60204.

AMERICAN ASSOCIATION OF ANATOMISTS, Louisville, Apr 20-23, 1976. Dr. John C Finerty, Pres, LSU Medical Center, Suite 1510, Canal LaSalle Bldg, New Orleans 70112.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Los Angeles, Apr 23-25, 1976. William T Maloney, Exec Off, 6 Beacon St, Boston 02108.

AMERICAN COLLEGE OF ALLERGISTS, Las Vegas, Nev, Apr 4-8, 1976. Eloi Bauers, JD, Exec Vice-pres/ Counsel, 2100 Dain Tower, Minneapolis 55402.

AMERICAN COLLEGE HEALTH ASSOCIATION, Denver, Apr 27-30, 1976. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

AMERICAN COLLEGE OF PHYSICIANS, Philadelphia, Apr 5-8, 1976, Dr. Edward C Rosenow, Jr, 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF SURGEONS, Boston, Apr 26-29, 1976. Frank Arado, 55 E Erie St, Chicago 60611.

■ AMERICAN GERIATRICS SOCIETY, INC, Houston, Apr 21-22, 1976. 10 Columbus Circle, New York 10019.

DIGESTIVE DISEASE WEEK, Miami Beach, Fla, Apr 22-27, 1976. Fred Kern, Jr, Pres, 4200 E 9th Ave, Denver 80220.

AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION, Palm Beach, Fla, Apr 27-28, 1976. Dr. LW Pratt, Sec, 37 Lawrence Ave, Fairfield, Me 04937.

AMERICAN FERTILITY SOCIETY, Las Vegas, Nev, Apr 5-8, 1976. Dr. JC Weed, Med Dir, 1608 13th Ave S, Suite 101, Birmingham, Ala 35205.

AMERICAN MEDICAL ELECTROENCEPHALOGRAPHIC ASSOCIATION, Savannah, Ga, Apr 7-11, 1976. Dr. WA Stephenson, Sansum Medical Clinic, Inc, PO Drawer LL, Santa Barbara, Calif 93102.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Cincinnati, Apr 24-29, 1976. HN Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN OTOLOGICAL SOCIETY, Palm Beach, Fla, Apr 25-26, 1976. Dr. GD Taylor, Sec-Treas, 221 Marshall Taylor Dr Bldg, Jacksonville, Fla 32207.

AMERICAN SOCIETY FOR ARTIFICIAL INTERNAL ORGANS, San Francisco, Apr 1-3, 1976. Mrs. KK Burke, Exec Dir, ASAIO National Office, Box 777, Boca Raton, Fla 33432.

AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY, Anaheim, Calif, Apr 11-16, 1976. Dr. GB Mider, Exec Off, 9650 Rockville Pike, Bethesda, Md 20014.

ASSOCIATION FOR THE ADVANCEMENT OF PSYCHOANALYSIS, New York, Apr 13, 1976. Dr. M Rendon, Sec, 333 E 30 St, New York 10016.

ASSOCIATION OF CONVALESCENT HOMES AND HOSPITALS FOR ASTHMATIC CHILDREN, Las Vegas, Nev, Apr 1-2, 1976. I Friedman, Exec Vice-pres, Spring Valley Rd, Ossining, NY 10562.

NATIONAL CONFERENCE ON RURAL HEALTH, AMERICAN MEDICAL ASSOCIATION, Phoenix, Ariz, Apr 8-9, 1976. Dept of Rural and Community Health, AMA, Division of Medical Practice, 535 N Dearborn St, Chicago 60610.

NATIONAL COUNCIL ON ALCOHOLISM, Washington, DC, Apr 9-10, 1976. Suite 1720, 2 Park Ave, New York 10016.

MAY

■ AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, Dallas, May 10-13, 1976. Dr. Warren H Pearse, Exec Off, 1 E Wacker Dr, Suite 2700, Chicago 60601.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, Dallas, May 15, 1976. Dr. RC Jones, Sec, 5323 Harry Hines, Dallas 75235.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, McAllen, May 20-23, 1976. Geraldine Midgley, Exec Off, Box 1287, Uvalde 78801.

AMERICAN SOCIETY FOR GASTROINTESTINAL ENDOSCOPY, Miami Beach, Fla, May 27-28, 1976. Charles B Slack, Inc, 6900 Grove Rd, Thorofare, NJ 08086.

CONFERENCE ON AMBULATORY MONITORING, Atlanta, May 20-21, 1976. Nancy Jacobsen, Conference Coordinator, 315 University District Bldg, 1107 NE 45th, Seattle, Wash 98105.

CONFERENCE ON CUTANEOUS TOXICITY, AMERICAN MEDICAL ASSOCIATION, Washington, DC, May 17-18, 1976. Dept of Drugs, AMA, 535 N Dearborn St, Chicago 60610.

■ SOUTHWEST ALLERGY FORUM, San Antonio, May 22-25, 1976. Dr. Peter B Kamin, 601 Oak Hills Medical Bldg, San Antonio 78229.

SOUTHEAST EMERGENCY MEDICINE CONGRESS, Atlanta, May 3-5, 1976. Registrar, 1919 Beachway Rd, Suite 5C, Jacksonville, Fla 32207.

■ SOUTHWESTERN SURGICAL CONGRESS, Houston, May 3-6, 1976. Dr. Jack A Barney, Sec-Treas, 708 Physicians & Surgeons Bldg, Oklahoma City 73103.

■ TEXAS MEDICAL ASSOCIATION, Annual Session, Dallas, May 6-9, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Dallas, May 7, 1976. Dr. Frank J Kelly, Sec-Treas, Box 647, Amarillo 79177.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, Dallas, May 7-8, 1976. Dr. Jeff R Moore, Box 3755, Amarillo 79106.

JUNE

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Las Vegas, Nev, Jun 13-16, 1976. Dr. Richard H Moiel, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77025.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Dallas, June, 1976. Dr. CB Shuey, Jr, Sec, 3500 Gaston Ave, Dallas 75246.

■ AMERICAN HEART ASSOCIATION, TEXAS CHAPTER, Houston, Jun 9-13, 1976. Box 9928, Austin 78766.

AMERICAN SOCIETY OF LAW AND MEDICINE, Boston, Jun 21-23, 1976. Dr. Elliot L Sagall, 454 Brookline Ave, Boston 02215.

■ AMERICAN MEDICAL ASSOCIATION, Dallas, Jun 27-Jul 1, 1976. 535 N Dearborn, Chicago 60610.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Houston, Jun 15-17, 1976. Dr. A Bryan Spires, Southwest Tower Bldg, Suite 900, 211 E 7th St, Austin 78701.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 19-22, 1976. Box 456, Sunland Park, NM 88063.

AMERICAN ASSOCIATION FOR REHABILITATION THERAPY, INC, Cleveland, Jul 12-16, 1976. Box 93, N Little Rock, Ark 72116.

AMERICAN CANCER SOCIETY, COLORADO DIVISION, Denver, Colo, Jul 16-17, 1976. 1809 E 18th Ave, Denver, Colo 80218.

AMERICAN SOCIETY OF ORAL SURGEONS, Chicago, Jul 17-18, 1976. 211 E Chicago Ave, Ste 930, Chicago 60611.

INSTITUTE FOR CONTINUING EDUCATION, Heidelberg/Mainz/Hamburg, W Germany, Jul 13-24, 1976. 2405 Westwood Ave, Box 11083, Richmond, Va 23230.

INTERNATIONAL UROLOGY CONGRESS, Johannesburg, South Africa, Jul 25-30, 1976. c/o Festivals & Conventions Trust (Pty) Ltd, Box 61326, Marshalltown, 2107 Transvaal, Rep of South Africa.

INTERNATIONAL CONGRESS OF HYPNOSIS AND PSYCHOSOMATIC MEDICINE, Philadelphia, Jul 1-3, 1976. Dr. Martin T Orne, The Institute of Pennsylvania Hospital, 111 N 49th St, Philadelphia 19139.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, Colo, Jul 23-24, 1976. 1764 Gilpin St, Denver, Colo 80210.

■ TEXAS REHABILITATION ASSOCIATION, Dallas, Jul 11-14, 1976. Box 20040, Dallas 75220.

DYAZIDE®

Trademark

Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F) and 25 mg. of hydrochlorothiazide.

MAKES SENSE

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

FOR LONG-TERM CONTROL OF HYPERTENSION*

Serum K^+ and BUN should be checked periodically. (See Warnings Section.)

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* **Warning**
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

***Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

Effectiveness across the spectrum of most common forms of insomnia

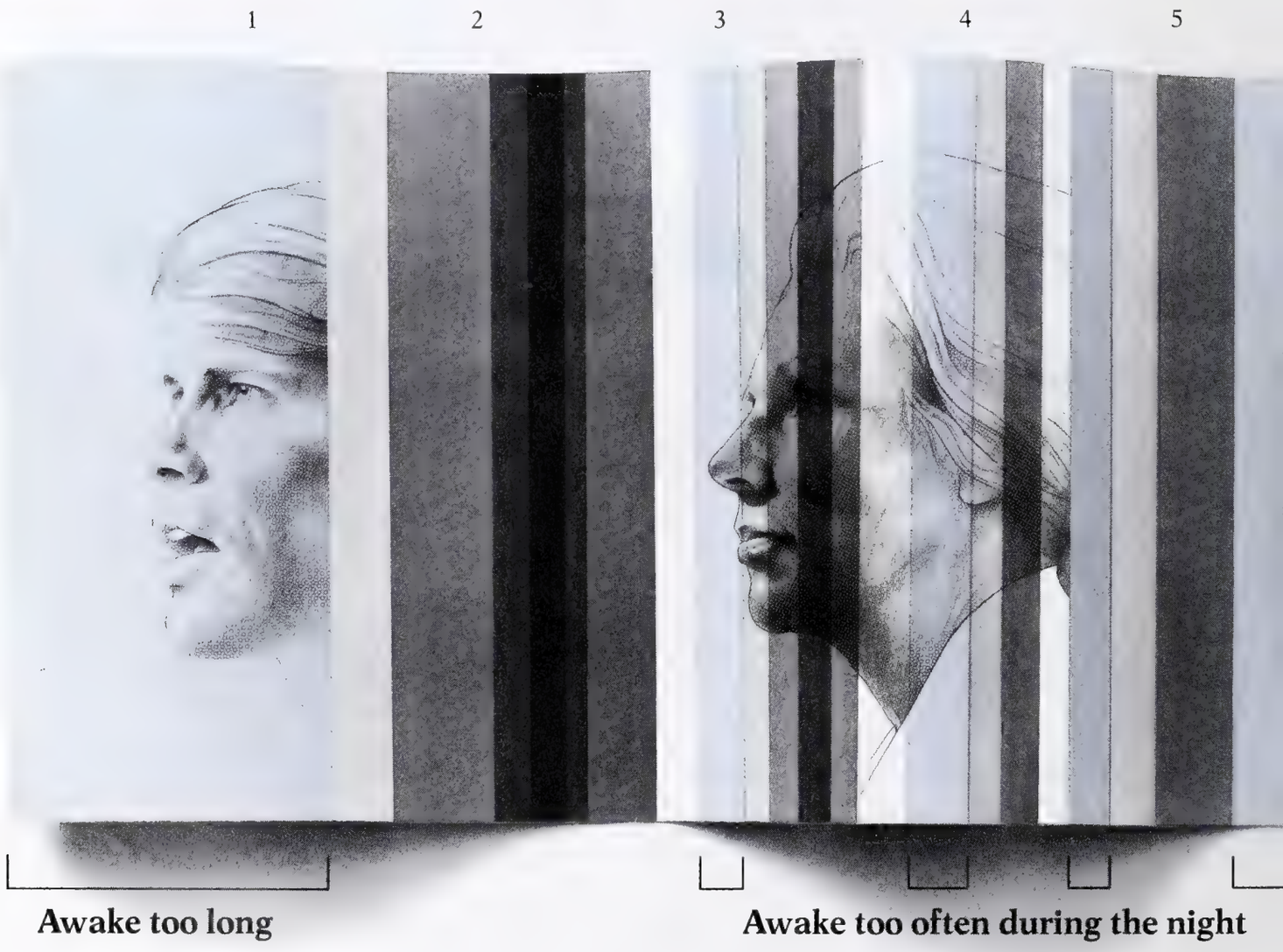
Awake too long, awake too often, awake too early...

These are the most common forms of insomnia, and may occur singly or in any combination. The night of troubled sleep depicted here comprises all three types. As the night progresses from left to right, each sleep stage is identifiable by its own shade of gray. Blue represents "Awake."

As you can see, this hypothetical "patient" takes well over an hour to fall asleep, awakens several times during the middle of the night and awakens too early in the morning.

Sleep Stages

- Awake
- REM
- Stage 1
- Stage 2
- Stage 3
- Stage 4



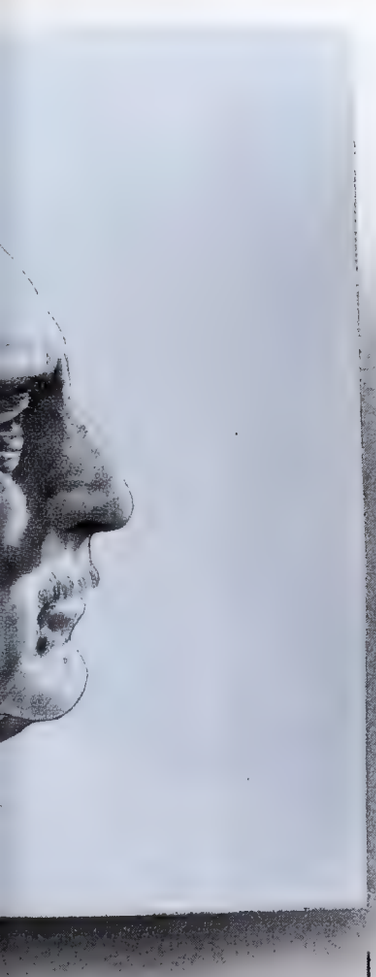
The insomnias most often occurring in young and older adults

For patients with trouble falling asleep (common in young adult insomnia patients), Dalmane (flurazepam HCl) 30 mg provides sleep within 17 minutes, on average. For those with trouble staying asleep or sleeping long enough (common in those over 50), Dalmane offers increased total sleep time with fewer nocturnal awakenings. These clinical results were demonstrated in studies conducted in four geographically separated sleep research laboratories[1-4]

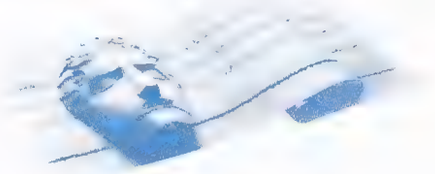
The relative safety of Dalmane (flurazepam HCl) is well documented

Dalmane (flurazepam HCl) is relatively safe and well tolerated; morning "hang-over" has been infrequent. The usual adult dosage is 30 mg; in elderly or debilitated patients, limit initial dosage to 15 mg to preclude over-sedation, dizziness or ataxia. Caution patients about possible combined effects with alcohol and other CNS depressants.

Broad-spectrum medication for the most common forms of insomnia



Awake too early



Dalmane®
(flurazepam HCl)

One 30-mg capsule *h.s.*— usual adult dosage
(15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.

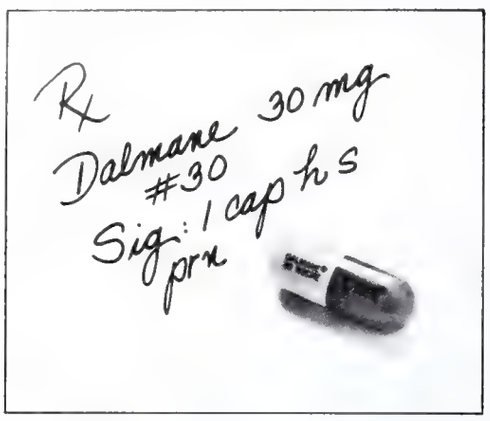
- ☐ induces sleep rapidly
- ☐ reduces nighttime awakenings
- ☐ lengthens total sleep time

ROCHE

Please see following page for a summary of complete product information.

Broad-spectrum medication for the most common forms of insomnia

Dalmane®
(flurazepam HCl) ℂIV



Objectively proved in the sleep research laboratory, Dalmane

- induces sleep within 17 minutes, on average
- reduces nighttime awakenings
- provides 7 to 8 hours sleep, on average, without repeating dosage

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum benefici effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

REFERENCES:

1. Karacan I, Williams RL, Smith JR: The sleep laboratory in the investigation of sleep and sleep disturbances. Scientific exhibit at the 124th annual meeting of the American Psychiatric Association, Washington DC, May 3-7, 1971

2. Frost JD Jr: A system for automatically analyzing sleep. Scientific exhibit at the 24th Clinical Convention of the American Medical Association, Boston, Nov 29-Dec 2, 1970; and at the 42nd annual scientific meeting of the Aerospace Medical Association, Houston, Apr 26-29, 1971

3. Vogel GW: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

ROCHE

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

DOCTOR

AAPS Is Helping YOU

By Being Militant to Save Private Practice

The Association of American Physicians and Surgeons -

- Openly leads the way in *saying "NO"* to interference with you, your patients and the high ethics of the profession.
    - Has urged since 1943 *Non-Involvement* with the profession's would-be controllers.
- Sued HEW in 1973 to *stop PSRO.*
    - Is now *appealing* PSRO to the *Supreme Court.*
- Pioneered successful legal challenge to *interference through hospitals.*
    - Did the *legal spadework* for U/R lawsuit by AMA.
- Will help any other medical organization challenging the *Health Planning Act.*
    - Is putting starch in the backs of other organizations (medical and non-medical) to stop taking federal government money and thereby *stop more government control.*
- Monitors current so-called National Health Insurance legislation and hearings to *defeat* by any legal means *politicalized medicine.*
    - AAPS action resulted in AMA recognizing rights of doctors to withhold services to force more reasonable *state malpractice liability laws.*
- AAPS alerts all to the inside truth by:
    - *News Letters*
    - *Medical Staff Bulletins*
    - *Speakers Bureau*
    - *Hot Line Phone Conferences*
    - *Graphic Illustrations proving government spending plus political medicine will destroy liberty.*

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CONTINUING EDUCATION COURSES

FEBRUARY

Family Medicine

Title: A Practical Workshop in Pulmonary Diseases
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 14-15, 1976
Duration: Continuous, 2 days, 11½ total course hours
Fee: $75
Designed For: General practitioners; Specialists
Credit: 11½ hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee observes procedure, lecture, open question, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: International Medical Assembly of Southwest Texas
Sponsors: UT Health Science Center at San Antonio; International Medical Assembly of Southwest Texas
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 26-27, 1976
Duration: Continuous, 2 days, 7-8 hours instruction per day, 15 total course hours
Fee: $35
Designed For: General practitioners; Specialists
Credit: 15 hours, AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

General Medicine

Title: Current Methods of Diagnosis and Treatment of Arthritis and Rheumatic Diseases
Sponsors: Baylor College of Medicine, Houston; Upjohn Co.
Location of Course: Marriott Motor Hotel, Houston
Date: Feb 7, 1976
Duration: Continuous, 1 day
Fee: $25
Designed For: General practitioners; Specialists
Credit: AAFP; Category I, AMA Physican's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund, Houston 77025

Immunology

Title: Immunology Symposium: Applied Clinical Immunology
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston; Baylor College of Medicine, Houston
Location of Course: UT Health Science Center at Houston
Dates: Feb 5-7, 1976
Duration: Continuous, 2½ days, 6 hours instruction per day
Designed For: General practitioners; Specialists in Laboratory Science
Credit: 15 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, laboratory work, lecture, panel
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Obstetrics & Gynecology

Title: Annual Conference on Fetus and Newborn in High Risk Pregnancy
Sponsors: Texas Tech University School of Medicine, Dept of Obstetrics and Gynecology; Texas Perinatal Center, Dept of Pediatrics, Lubbock
Location of Course: Southpark Inn, Lubbock
Dates: Feb 26-28, 1976
Duration: Continuous, 3 days, 7 hours instruction per day
Designed For: Specialists in Obstetrics-Gynecology, Pediatrics
Credit: 18 hours, AAFP Elective
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel, seminar, programmed instruction (self-teaching device)
Contact: Dr. James E Dyson, Assistant Dean for Education, Texas Tech University School of Medicine, Box 4569, Lubbock 79409

Ophthalmology

Title: Symposium on Ophthalmology for the Non-Ophthalmologist
Sponsor: UT Medical School at Houston, Program in Ophthalmology
Location of Course: Hermann Hospital Auditorium, Houston
Date: Feb 7, 1976
Duration: ½ day, 3 hours instruction
Fee: $15
Designed For: General practitioners
Credit: AAFP
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Richard S Ruiz, Director, Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77025

Title: Retina Symposium
Sponsor: UT Medical School at Houston, Program in Ophthalmology
Location of Course: Hermann Hospital Auditorium, Houston

Date: Feb 21, 1976
Duration: 1 day, 8 hours instruction
Fee: $50
Designed For: Specialists in Ophthalmology
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Richard S Ruiz, Director, Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77025

Title: Annual Symposium of the San Antonio Ophthalmology and Otolaryngology Society
Sponsors: UT Health Science Center at San Antonio; San Antonio Ophthalmology and Otolaryngology Society
Location of Course: UT Health Science Center at San Antonio
Date: Feb 28, 1976
Duration: Continuous, 1 day, 7 hours instruction per day, 7 total course hours
Fee: $40
Designed For: Specialists
Credit: 7 hours, AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Otolaryngology

Title: The Voice Institute
Sponsors: Baylor College of Medicine, Houston; Methodist Hospital, Houston
Location of Course: Methodist Hospital, Houston
Dates: Feb 5-6, 1976
Duration: Continuous
Fee: To be determined
Designed For: Specialists
Credit: Category I, AMA Physician's Recognition Award
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Pathology

Title: Pathology of the Liver
Sponsors: UT Health Science Center at Dallas; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: UT Health Science Center at Dallas
Dates: Feb 14-15, 1976
Duration: Continuous, 1½ days, 9 total course hours
Fee: $100; $65 for house officers, fellows and trainees
Designed For: Specialists in Internal Medicine, Pathology, Gastroenterology
Credit: 9 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Title: A Review of Clinical Microbiology
Sponsor: A Webb Roberts Center for Continuing Education, Dallas
Dates: Feb 23-26, 1976
Duration: Continuous, 4 days, 6 hours instruction per day
Fee: $120
Designed For: Specialists in Pathology
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Pediatrics

Title: Perception Problems of the Pediatric Subject
Sponsor: Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Feb 5-6, 1976
Duration: Continuous, 2 days, 16 hours instruction
Fee: $125
Designed For: General practitioners; Specialists
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Title: Pediatrics 1976—A Mini-Symposium
Sponsor: District I Medical Society
Location of Course: Downtown Holiday Inn, El Paso
Date: Feb 7, 1976
Duration: 1 day, 7 hours instruction
Fee: $25
Designed For: General practitioners; Specialists in Pediatrics
Credit: 7 hours, AAFP Elective
Teaching Methods: Audiovisual materials, lecture, open question, seminar
Contact: Dr. Laurance N Nickey, Secretary, District I Medical Society, 1301 Montana, El Paso 79902

Title: Developmental Theory of Sensory Motor Integration
Sponsors: Texas Occupational Therapy Association: Capital-Centex District; UT Systemwide School of Nursing
Location of Course: Thompson Conference Center, Austin
Dates: Feb 26-28, 1976
Duration: Continuous, 2½ days, 6 hours instruction per day
Fee: $45
Designed For: General practitioners; Specialists in Pediatrics
Enrollment: Maximum, 250
Credit: 15 hours
Teaching Methods: Audiovisual materials, lecture, open question, patient

demonstration
Contact: Ms. Cindy Jones, Seminar Coordinator, Texas Occupational Therapy Association, 8812 Tallwood No 87, Austin 78759

Radiology & Radioisotopes

Title: High Energy Electron, X-Ray and Neutron Dosimetry
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Dates: Feb 2-7, 1976; Aug 2-7, 1976
Duration: Continuous, 6 days, 63 total course hours
Fee: $250
Designed For: Specialists
Enrollment: Maximum, 15
Teaching Methods: Lecture, open question
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: Refresher Course in General Diagnostic Radiology
Sponsors: Dept of Radiology, UT Southwestern Medical School; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: Fairmont Hotel, Dallas; and Lecture Room D 1.502, UT Southwestern Medical School, Dallas
Dates: Feb 19-21, 1976
Duration: Continuous, 3 days, 5-8 hours instruction per day, 18 total course hours
Fee: $150
Designed For: Specialists in Radiology
Credit: 18 hours, Category I, AMA Physician's Recognition Award
Teaching Method: Lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Surgery

Title: The Use of Staplers in Surgery
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Feb 19-20, 1976
Duration: Continuous, 2 days, 11 hours instruction
Fee: $160
Designed For: Specialists
Enrollment: Maximum, 30 physicians, 15 nurses
Credit: 11 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, workshop handling instruments, experimental lab for clinical application of materials
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

MARCH

Cardiovascular Disease

Title: Exercise Testing in Clinical Practice
Sponsors: UT Health Science Center, Houston; Baylor College of Medicine
Location of Course: UT Health Science Center at Houston, Auditorium
Date: Mar 5, 1976
Duration: 1 day, 6 hours instruction
Fee: To be determined
Designed For: General practitioners; Specialists in Cardiology
Credit: 6 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Chest Disease

Title: Postoperative Pulmonary Diseases
Sponsor: UT Health Science Center at Houston, Division of Continuing Education
Location of Course: To be determined
Dates: Mar 19-20, 1976
Duration: Continuous, 2½ days, 6-7 hours instruction per day
Fee: To be determined
Designed For: General practitioners; Specialists in Surgery, Internal Medicine
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Family Medicine

Title: Recent Advances in Clinical Immunology and Microbiology
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Mar 13-14, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 10 total course hours
Fee: $80
Designed For: General practitioners; Specialists
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel

Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Habilitation of the Deaf Child
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Date: Mar 27, 1976
Duration: Continuous, 1 day, 7 hours instruction
Fee: $40
Designed For: General practitioners; Specialists
Enrollment: Minimum, 10
Credit: 7 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Gastroenterology

Title: William Beaumont Gastrointestinal Symposium
Sponsor: William Beaumont Army Medical Center, El Paso
Dates: Mar 17-19, 1976
Duration: Continuous, 3 days, 4 hours instruction per day, 12 total course hours
Fee: None
Designed For: Specialists in Gastroenterology, Surgery, Internal Medicine
Enrollment: Minimum, 100; Maximum, 200
Credit: 12 hours, AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel
Contact: Col. J Loren Pitcher, MC, USA, Chief, Dept of Medicine, William Beaumont Army Medical Center, El Paso 79920

General Medicine

Title: Spring Clinical Conference
Sponsor: Dallas Southern Clinical Society
Location of Course: Statler Hilton Hotel, Dallas
Dates: Mar 15-17, 1976
Duration: Continuous, 3 days
Fee: $50
Designed For: General practitioners; Specialists
Credit: 25 hours, AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, live clinic, open question, panel, patient demonstration, seminar
Contact: Robert L Heath, Exec Officer, Dallas Southern Clinical Society, 3630 Noble Ave, Dallas 75204

Title: Texas Academy of Family Physicians—Spring Seminar
Sponsor: TAFP, Permian Basin Chapter, Alpine
Location of Course: Indian Mountain Lodge, Davis Mountains State Park, Fort Davis
Date: Mar 27, 1976
Duration: Continuous, 1 day, 6 hours instruction
Fee: $25
Designed For: General practitioners; Specialists
Credit: 6 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Dr. WB Pate, Secretary, TAFP, Permian Basin Chapter, 202 N Second St, Alpine 79830

Internal Medicine

Title: Alcoholic Liver Disease: Pathology, Pathogenesis, Complications and Treatment
Sponsors: A Webb Roberts Center for Continuing Education; Texas Commission on Alcoholism; American Association for Study of Liver Diseases
Location of Course: UT Health Science Center at Dallas
Date: Mar 27, 1976
Duration: Continuous, 1 day
Fee: None
Designed For: General practitioners; Specialists in Pathology, Internal Medicine
Credit: 4 hours, Category I, AMA Physician's Recognition Award
Teaching Method: Lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Malignant Disease

Title: 29th Annual Symposium on Fundamental Cancer Research: Growth Kinetics and Biochemical Regulation of Normal and Malignant Cells
Sponsors: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston; National Cancer Institute, Tex Division of American Cancer Society; UT Health Science Center at Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Mar 10-12, 1976
Duration: Continuous, 3 days, 6 hours instruction per day, 18 total course hours
Designed For: General practitioners; Specialists
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. George R Blumenschein, Assistant Director/Education, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, 6723 Bertner, Houston 77025

Title: Immunotherapy and Other Advances in the Management of Cancer
Sponsor: Wadley Institutes of Molecular Medicine, Dallas

Dates: Mar 26-27, 1976
Duration: 2 days
Designed For: General practitioners; Specialists
Enrollment: Maximum, 200
Credit: 16 hours
Teaching Methods: Audiovisual materials, open question, panel, seminar
Contact: Dr. J M Hill, Executive Director, Wadley Institutes of Molecular Medicine, 9000 Harry Hines, Dallas 75235

Medical Writing

Title: Medical and Technical Writing
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Dates: March and September, 1976
Duration: Intermittent, 1 day per week, 4 weeks, 2 hours instruction per day, 8 total course hours
Fee: $35
Designed For: General practitioners; Specialists
Enrollment: Maximum, 20
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Enrollee performs procedure, lecture
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Neurology

Title: Fourth Intensive Course in Neuromuscular Diseases
Sponsors: Veterans Administration Hospital, Houston; Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Mar 25-27, 1976
Duration: Continuous, 3 days
Fee: None
Designed For: General practitioners; Specialists
Enrollment: Minimum, 200; Maximum, 300
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, live clinic, panel
Contact: Dr. Fred M Taylor, Dir, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Neurology

Title: Current Therapy in Epilepsy
Sponsors: Veterans Administration; Dept of Urology, UT Southwestern Medical School; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: Dallas
Dates: Mar 24-25, 1976
Duration: Continuous, 2 days
Designed For: General practitioners; Specialists
Credit: Category I, AMA Physician's Recognition Award
Teaching Method: Lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Otolaryngology

Title: Visiting Professor in the Dept of Otorhinolaryngology and Communicative Sciences
Sponsor: Baylor College of Medicine, Dept of Otorhinolaryngology and Communicative Sciences
Location of Course: Baylor College of Medicine, Texas Medical Center, Houston
Dates: Mar 18-20, 1976
Duration: Continuous, 3 days
Fee: To be determined
Designed For: Specialists
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, bedside rounds, clinical conference, lecture, panel
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Pathology

Title: Alcoholic Liver Disease: Pathology, Pathogenesis, Complications and Treatment (see INTERNAL MEDICINE)

Pediatrics

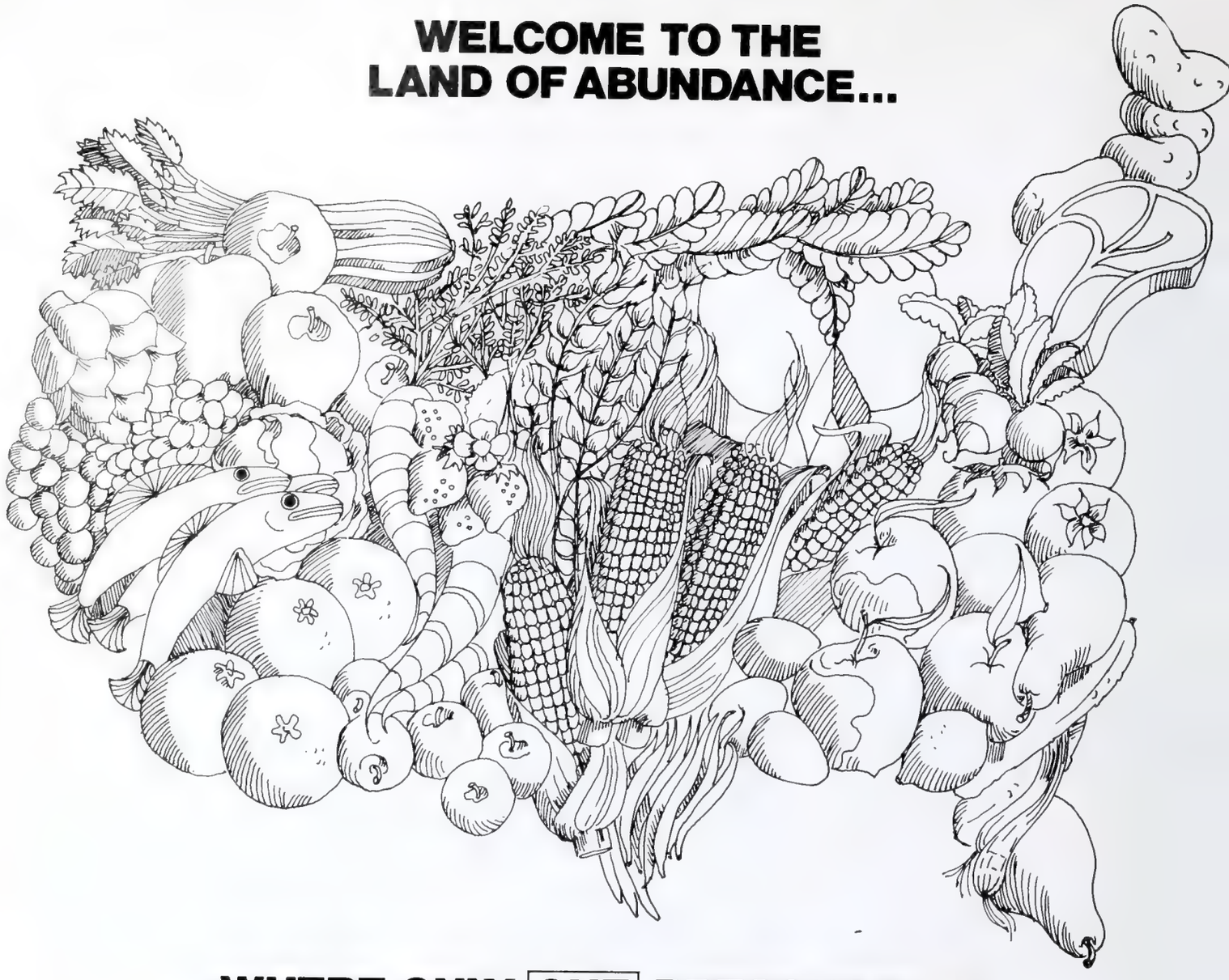
Title: Basic Immunology for the Clinician
Sponsors: Immunology Faculty, UT Health Science Center at Dallas; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: UT Southwestern Medical School, Dallas
Dates: Mar 3-6, 1976
Duration: Continuous, 4 days, 30 total course hours
Fee: $200
Designed For: General practitioners; Specialists
Credit: 30 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, panel
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Surgery

Title: William Beaumont Gastrointestinal Symposium (see GASTROENTEROLOGY)

Title: Spring Clinical Conference (see GENERAL MEDICINE)

WELCOME TO THE LAND OF ABUNDANCE...



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*First Health and Nutrition Examination Survey, DHEW Pub. No. (HRA) 74-1219-1, National Center for Health Statistics, Rockville, Maryland. (This report indicates that approximately 95% of the children 1-5 years old had iron intakes *below* the standard set by the Food and Nutrition Board of the National Academy of Sciences.)

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Dietary Supplement

with **IRON** Syrup

Each teaspoonful (5 cc) contains:

Elemental Iron (as Ferric Pyrophosphate)	30 mg
l-Lysine HCl	300 mg
Thiamine HCl (B_1)	10 mg
Pyridoxine HCl (B_6)	5 mg
Vitamin B_{12}	25 mcgm
Sorbitol	3.5 gm
Alcohol	0.75%

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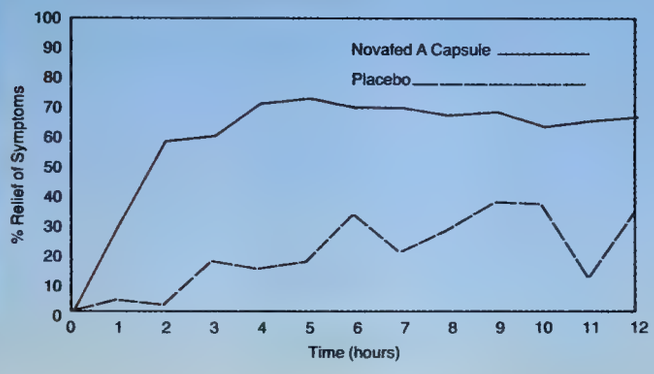
Prompt onset of effect is followed by full 12-hour relief.

(Please refer to the following page for bioavailability studies and prescribing information.)

Patients with severe pollen allergies were tested during hay fever season in a countryside environment and asked to rate severity of five different symptoms on a scale of 1 to 4.

Clinical Study: Degree of Relief from Itchy Eyes and Nose and Throat, Watery Eyes, Runny Nose*



*Unpublished data, Medical Department Files, Dow Pharmaceuticals, The Dow Chemical Company, Indianapolis, Indiana.

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Each capsule contains pseudoephedrine hydrochloride 120 mg. and chlorpheniramine maleate 8 mg

Controlled-Release Decongestant Plus Antihistamine

It goes the distance.

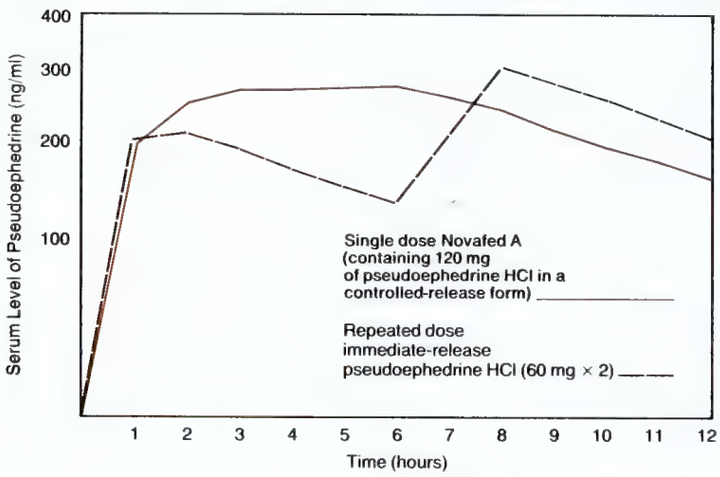
Prompt onset and sustained serum levels over 12 hours.

A bioavailability study confirmed that the sustained 12-hour action of Novafed A was comparable to that of immediate-release medication taken at 6-hour intervals.

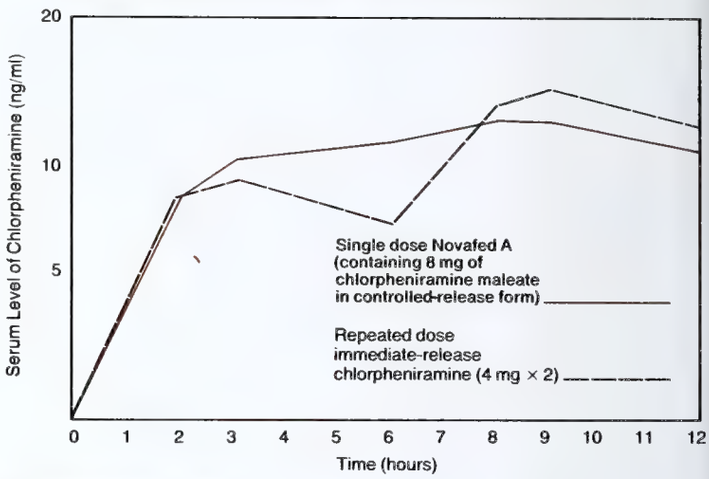
The chart at the left shows the serum levels of pseudoephedrine. Initial serum levels following one Novafed A Capsule were comparable to those following a single dose of 60 mg. pseudoephedrine hydrochloride in an immediate-release form. Serum levels of pseudoephedrine over a 12-hour period following a single dose of Novafed A were also comparable to those obtained by an immediate-release form taken every 6 hours.

The chart at the right shows the serum levels of chlorpheniramine. Initial serum levels following one Novafed A Capsule were comparable to those following a single dose of 4 mg. chlorpheniramine maleate in an immediate-release form. Serum levels of chlorpheniramine over a 12-hour period following a single dose of Novafed A were also comparable to those obtained by an immediate-release form taken every 6 hours.

Comparison of Mean Serum Levels of Pseudoephedrine Following Novafed A and an Immediate-Release Reference Formulation*



Comparison of Mean Serum Levels of Chlorpheniramine Following Novafed A and an Immediate-Release Reference Formulation*



*Unpublished data, Medical Department Files, Dow Pharmaceuticals, The Dow Chemical Company, Indianapolis, Indiana.

DESCRIPTION: Each NOVAFED A capsule contains 120 mg. of pseudoephedrine hydrochloride and 8 mg. of chlorpheniramine maleate. The specially formulated pellets in each capsule are designed to provide continuous therapeutic effect for about 12 hours. Nearly one-half of the active ingredients is released soon after administration and the remainder is released slowly over the remaining time period.

ACTIONS: NOVAFED A combines the action of a nasal decongestant, pseudoephedrine hydrochloride, and an antihistamine, chlorpheniramine maleate. These ingredients are combined to provide prompt and sustained nasal and upper respiratory decongestant and antihistaminic action.

INDICATIONS: NOVAFED A is indicated for the relief of nasal congestion and eustachian tube congestion associated with the common cold, sinusitis and acute upper respiratory infections. It is also indicated for perennial and seasonal allergic rhinitis, vasomotor rhinitis, allergic conjunctivitis due to inhalant allergens and foods and for mild, uncomplicated allergic skin manifestations of urticaria and angioedema. Decongestants in combination with antihistamines have been used for many years to relieve eustachian tube congestion associated with acute eustachian salpingitis, aerotitis media, acute otitis media and serous otitis media. NOVAFED A may be given concurrently, when indicated, with analgesics and antibiotics.

CONTRAINDICATIONS: Symphathomimetic amines are contraindicated in patients with severe hypertension, severe coronary artery disease, and in patients on MAO inhibitor therapy. Antihistamines are contraindicated in patients with narrow-angle glaucoma, urinary retention, peptic ulcer, during an asthmatic attack, and in patients receiving MAO inhibitors.

Children under 12: NOVAFED A controlled-release capsules should not be used in children less than 12 years of age.

Nursing Mothers: Pseudoephedrine is contraindicated in nursing mothers because of the higher than usual risk for infants from sympathomimetic amines.

Hypersensitivity: This drug is contraindicated in patients with hypersensitivity or idiosyncrasy to sympathomimetic amines or antihistamines. Patient idiosyncrasy to adrenergic agents may be manifested by insomnia, dizziness, weakness, tremor or arrhythmias.

WARNINGS: Sympathomimetic amines should be used judiciously and sparingly in patients with hypertension, diabetes mellitus, ischemic heart disease, increased intraocular pressure, hyperthyroidism, or prostatic hypertrophy. Sympathomimetics may produce central nervous system stimulation and convulsions or cardiovascular collapse with accompanying hypotension.

Antihistamines may impair mental and physical abilities required for the performance of potentially hazardous tasks, such as driving a vehicle or operating machinery, and mental alertness in children. Chlorpheniramine maleate has an atropine-like action and should be used with caution in patients with increased intraocular pressure, hyperthyroidism, cardiovascular disease, hypertension or in patients with a history of bronchial asthma.

Do not exceed recommended dosage.

Use in Pregnancy: The safety of pseudoephedrine for use during pregnancy has not been established.

Use in Elderly: The elderly (60 years and older) are more likely to have adverse reaction to sympathomimetics. Overdosage of sympathomimetics in this age group may cause hallucinations, convulsions, CNS depression, and death. Therefore, safe use of a short-acting sympathomimetic should be demonstrated in the individual elderly patient before considering the use of a sustained-action formulation.

PRECAUTIONS: This drug should be used with caution in patients with diabetes, hypertension, cardiovascular disease and hyperreactivity to ephedrine. The antihistaminic may cause drowsiness and ambulatory patients who operate machinery or motor vehicles should be cautioned accordingly.

ADVERSE REACTIONS: Hyperreactive individuals may display ephedrine-like reactions such as tachycardia, palpitations, headache, dizziness, or nausea. Patients sensitive to antihistamines may experience mild sedation.

Sympathomimetic drugs have been associated with certain untoward reactions including fear, anxiety, tenseness, restlessness, tremor, weakness, pallor, respiratory difficulty, dysuria, insomnia, hallucinations, convulsions, CNS depression, arrhythmias, and cardiovascular collapse with hypotension.

Possible side effects of antihistamines are drowsiness, restlessness, dizziness, weakness, dry mouth, anorexia, nausea, headache and nervousness, blurring of vision, heartburn, dysuria and very rarely, dermatitis.

DRUG INTERACTIONS: MAO inhibitors and beta adrenergic blockers increase the effect of sympathomimetics. Sympathomimetics may reduce the antihypertensive effects of methyldopa, mecamylamine, reserpine and veratrum alkaloids. Concomitant use of antihistamines with alcohol, tricyclic antidepressants, barbiturates and other central nervous system depressants may have an additive effect.

DOSAGE AND ADMINISTRATION: One capsule every 12 hours. Do not give to children under 12 years of age.

CAUTION: Federal law prohibits dispensing without prescription.

HOW SUPPLIED: NOVAFED A is supplied in red and orange colored hard gelatin capsules, monogrammed with the Dow diamond followed by the number 109, in bottles of 100.

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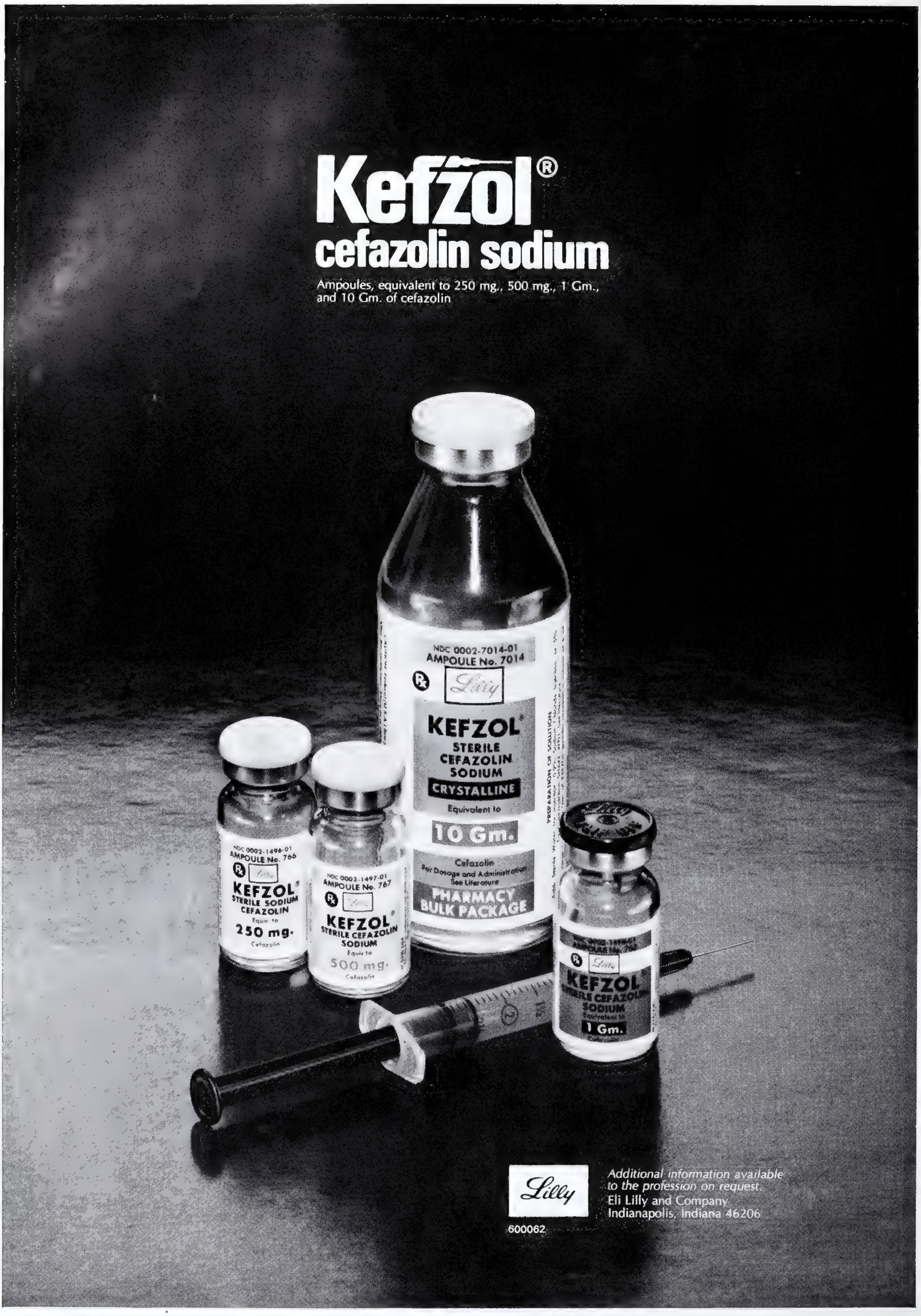
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The family and physical illness

Jerry M. Lewis, MD

The impact of a culture's model of disease upon both patient and physician behavior is reviewed. The article focuses upon the concept of general susceptibility to illness and reviews those psychosocial factors which influence such susceptibility. Moving from the individual patient to the family, the author proposes that a comprehensive model of health and illness must attend the family as a possible unit of health and disease. Research findings are presented which lend weight to the idea that the family as well as the individual can be seen as the patient or unit of health and disease. Certain family characteristics are associated with low rates of physical illness. The need for further research on family patterns of illness is emphasized.

A culture, at any given historical period, offers to its participants a model of disease which then dictates that which members of a culture accept as real. Physicians participate in these preconceptions; they influence those features of disease to which physicians attend. In a search for a single, specific cause for each disease, recent biological discoveries in this culture's model of disease have focused on the individual patient, thereby participating in a dualism in which physical processes are considered as separate from and perhaps more "real" than psychological processes. Thus, three concepts—disease as it relates to the individual, a dualism of body and mind, and linear causality—continue to influence this culture's concept of disease. They do so despite the insights provided by workers like Fabrega and Manning[11] who described another culture's truly integrated model of disease. Invariably, in this model, the conceptualization of disease involves biological functioning, personality, and social relations, all linked in a homeostatic manner with multiple feedback loops.

The insights provided by psychophysiologic research are seldom incorporated into the current prevailing model of disease. In part, this may reflect a premature search for specific psychodynamic variables associated with distinct disease entities without sufficient attention to the role of psychological factors in all disease. Cassell,[5] however, suggests that a central part of the problem is that disease and illness have become separated in our culture. He writes: "Patients now wander about disabled, but without a culturally acceptable mantle of disease with which to clothe the nakedness of their pain, and doctors tend to define their role more narrowly, seeing themselves as curers of disease rather than healers of the sick." Bakan,[1] Jourard,[19] Balint,[2] and Hinkle[13-15] are but a few of the writers who emphasize the need to consider the role of multiple etiological factors in any episode of disease.

There is a body of research which suggests that individual man is predisposed to

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The article is an abbreviated and modified version of a chapter in a forthcoming book, "No Single Thread: Psychological Health in Family Systems," by Jerry M. Lewis, W. Robert Beavers, John T. Gossett, and Virginia Austin Phillips, to be published by Brunner/Mazel, New York.

illness under the following circumstances:

1. When he perceives his social and interpersonal environment as being highly unsatisfactory.[4,12,13,15,17,25,27,40] This group of studies focuses on the role of consciously experienced stress, much of which is interpersonal, and its role in disease etiology.

2. When he experiences a great number of life changes in a short time.[18,22,23,31-34] This research emphasizes life change—theoretically, either positive or negative. Many of the heavily weighted items suggest loss, per se, and thus are interpersonal in nature.

3. When he experiences severe separation or object loss.[8,9,21,22,28,36,38]

4. When he develops a prolonged, affective state of hopelessness or helplessness.[9,10] This research, noting the universality of separation and loss, focuses instead on the individual's affective response to the real, threatened, or symbolic event.

These studies, taken as a whole, afford explanatory concepts for the observations that suggest that some people experience more illness than others[16] and that, for many individuals, episodes of apparently unrelated illnesses tend to cluster in time.[32,33]

If we turn the focus from the level of the individual as a separate entity to the family as a social organism, is there evidence that it would be useful to conceptualize the family as the unit of illness? Although family system studies have provided a new and important perspective in regard to mental illness, they have not yet been explored fully in regard to all illnesses. Almost 30 years ago Richardson[37] wrote of general family susceptibilty to illness; that is, the family as the unit of illness because, in his terms, "the family is the unit of living." He delineated different types of family equilibria and suggested that unusually rigid family systems impart increased vulnerability to all physical illness. He suggested that when the physician is faced with chronic disease or repetitive acute illness, it is important to consider whether or not the individual or the family is the unit of the disease. Kellner[20] and Peachey[30] presented evidence regarding family patterns of illness and the tendency in some families for illnesses to cluster in time.

The emergence of family medicine as a discipline is seen by Ransom and Vandervoort[35] to be appropriately concerned with the relationship of life in small groups to health and illness. They consider that disease in one member of a family should be viewed as one symptom of a pathological family process: that is, they are concerned with the ecology of relationships within the family.

While a few individuals have been interested in the general susceptibility of different families to all illnesses and disease, relatively little research has been generated. In a provocative exception, Dingle, Badger, and Jordan[6] studied 25,000 illnesses occurring in 86 families during a ten-year period. They noted that respiratory diseases accounted for 63% of all diseases and that although there was great variation between families in incidence of respiratory disease, there was a tendency for members of the same family

to have similar levels of incidence, and that a given family tended to remain at the same level of incidence over a five-year period. Some families have consistently high, and others low, levels of incidence. The authors state, "The relative forces of heredity and environment cannot be easily measured. It is becoming increasingly apparent, however, that the 'family unit' is an important entity in itself in the study of disease and serious consideration must be given to the effects of heredity and experience within this unit."

I wish to share initial research findings directed to the question: "Is there a way of being a family which influences the vulnerability of family members to all disease processes?" Our study is one part of a broader, ongoing research project which has as its goal the clarification of those family processes which characterize psychologically healthy or optimally functioning families. Our research group was interested primarily in family interactional patterns. In order to study these patterns each family unit in our sample of 33 families, as a family, approached certain problems to solve or tasks to accomplish. These essentially verbal tasks were videotaped and the communication processes of the family were evaluated. We relied on three levels of data analysis: the clinical observation of videotaped family interviews, the application of a variety of rating scales to the family communication processes, and the microanalytic analyses, that is, counting frequencies of particular kinds of interactions. For purposes of this presentation, however, we present only our findings regarding the families and their reported physical illnesses.

Prior to the videotaping, a family medical history was obtained, starting with the parental marriage. Each family also agreed to keep a daily physical health log for six months. Although, as a whole, this was a physically healthy group of families, striking differences were noted between families in the history of illness. In the course of 20 years, some families experienced no life-threatening illnesses, no hospitalizations other than for the birth of children, no fractures, and minimal disability from minor medical problems (and these were families with young children). A few of the research volunteer families had experienced multiple life-threatening illnesses, hospitalizations, fractures, and significant disability from minor illnesses.

The families were not informed that any connection would be made between the videotaped family interactional testing and their physical health logs which were to be kept for the subsequent six months.

One of the interactional tasks concerned a brief audiotaped vignette of a hospital scene in which a family is visiting a gravely ill family member. The fictional family was joined by a physician who, in response to the family's question of whether the patient will live or die, responds that he "doesn't know but that there is damage." At this point the taped vignette ended and the family was asked to construct an ending to the story. They were told that there was no right or wrong ending and that they had ten minutes for the task. We selected this death, or dying, stimulus because of the leads growing out

of the study of the life circumstances under which many individuals appear to develop a variety of illnesses.[28]

The research staff studied the videotaped responses of three families and developed rating scales based on the premise that death and dying were the explicit themes involved in the vignette. Five-point scales were constructed for the following variables: (1) cognitive involvement—the degree to which the family system allowed human death to be discussed; (2) empathy to loss—the degree to which a family was able to project itself at a feeling level into the situation in the vignette; (3) personalization—the degree to which the family system discussed death, or the threat of death, of a member of the nuclear family or extended family; (4) task efficiency—the degree to which the family discussed alternatives and agreed on an ending; and (5) overall coping—this rating scale asked the rater for his impression of the overall capacity of the family to face the death of the oldest child.

Following this family interactional testing of 33 research volunteer families (none of which contained an identified psychiatric patient), each family kept a daily health log for six months. A recorder, usually the mother, noted each day any physical symptoms of any member of the family. The recorder described the symptoms, the degree of disability, and the duration of both the symptoms and disability. On those days when no member of the family reported any symptoms, the reporter was asked to write "all well" in the family health log.

Thirty-one families maintained daily health records for the six-month period. The daily notations were detailed and revealed that most illnesses reported were minor—respiratory, gastrointestinal, and musculoskeletal. There were only three hospitalizations totaling 18 days of disability for the entire group. There were 184 days in the six-month period and the 144 individuals had a total of 160 office visits to their physicians, and averaged only 3.43 days of disability.

The 31 videotaped segments dealing with the death or dying stimulus were scored independently by two raters; one had participated in the evolution of the scales and the other had not. These two raters' scores for the five scales correlated at significant levels.

The families were ranked according to the number of "all well" days. The Personalization Scale correlated significantly ($r_s = .35$, $p < .05$) with the rank order of family physical health.

The 31 ten-minute videotape segments were reviewed, focusing selectively on the personalization process. Family responses ranged in quality from giggling, artificial references to taking a dog to the veterinarian, to a terse "he got well and lived happily ever after," to serious exploration of how members of that particular family would feel and act if specific

members of their family died. In 20 of the families, one family member introduced the subject of death, but was ignored by the family. These families are referred to as "death mentioned." In the other 11 families, seven discussed death in highly personalized terms; that is, death in terms of either the nuclear or extended family. The average number of "all well" days for those 20 families in which death was mentioned but not discussed was 96.8. Those additional four families in which death was discussed, but in impersonal and abstract terms, the average number of "all well" days was 95.8. However, for those seven families who discussed death in a personalized way, the average number of "all well" days was 131.9. This difference of 36 "all well" days is significant at the .025 level.* Small sample means are difficult to evaluate; however, it should be noted that only one family which personalized the loss vignette fell below the overall average. The median of those families who personalized this segment was 137 well days.

We found no significant differences in family size or average age of children. Also, there were no significant differences depending upon whether the parent or child introduced the subject of death. The differences between the groups remained when the groups of families were compared after dropping out data about the individual member in each family who had the most sick days, revealing that the rank order of physical health of a family by "all well" days was not dependent on the presence of the least well member.

There were no differences between the groups of families in the frequency of recent losses. However, losses were defined narrowly as the loss of a significant other by death. This study did not attend to threatened or symbolic losses.

The relationship between the level of family psychological health and family physical health is unclear. The correlation (Spearmen r = .32) was positive but failed to reach statistical significance.

The limitations of this preliminary study need underscoring. Our sample was small and restricted. All the families were white, middle- and upper-middle-class, Protestant urbanites. In addition, families with severe levels of psychological dysfunction were excluded. We relied upon illness reporting rather than monitoring the physical health of the families directly. These methodological issues need to be faced in a subsequent predictive study.

The results, however, confirm the initial hypothesis: There does appear to be something about the way a family is organized that may influence the vulnerability of the family members to illness. This adds weight to the writings of those clinicians and investigators who have suggested that an adequate model of disease must attend

*Student's distribution one-tailed test, t = 13.85.

not only the individual, but consider also the family as a possible unit of illness. The early writings have been augmented recently by the theoretical constructs of Weakland[39] and Moss.[26] The latter has described a comprehensive theoretical system which includes the individual, his relevant communication network, the quality of his integration with that network, and the natural history of the network as a social organism. Moss terms this dynamic, multilevel interaction "biosocial resonation."

This preliminary study adds weight also to the work of previous investigators who have found correlations between illness rates in individuals and having experienced significant losses. Losses, and particularly those which are not adequately mourned, may play a role in the etiology of a wide variety of psychological and physical disturbances. It is tempting to consider the individual or the family response to loss as the ultimate test of adaptive capability. Becker,[3] however, would say "not quite." The ultimate test of adaptive capability, in his terms, is the ability to face the central existential despair which springs from facing the prospect of one's own death. It appears to us that to grow up in some families may give one the advantage of learning to deal with death openly and personally. Our research suggests that such families experience less physical illness. The novelist Durrell[7] has said that man needs his illnesses to shield him from reality. It may be that those families that face the reality of death do, indeed, "need" fewer illnesses.

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Dr. Lewis, Director of Research and Training, Timberlawn Foundation, Inc., 2750 Grove Hill Road, Dallas, Texas 75227.

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Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

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Acute organic brain syndromes: Clinical considerations

R. A. DeVaul, MD

Few serious medical syndromes are as common as the organic brain syndromes, yet few physicians, regardless of specialty, recognize any but the most extreme cases.[1,4] Even these patients are often labelled "uncooperative" or "schizophrenic" and are treated with inappropriate medications to control their behavior. While appropriate treatment generally leads to complete recovery, failure to recognize this syndrome leads to a high risk of permanent brain damage or death.[7] This article is a clinical review of selected literature and of my experience as chief of psychosomatic liaison service, The University of Texas Medical School at Houston.

Definition of Terms

"Organic brain syndrome" refers to a syndrome of global cognitive impairment caused by diffuse impairment of brain tissue. "Acute" refers to brain syndromes that are potentially reversible and reflect toxic or physiologic brain cell insult that has not progressed to permanent dysfunction or cell death.[1] The primary symptoms of this syndrome are disorientation, impaired recent memory, inability to register or learn new information, and reduced intellectual function and judgment. These symptoms occur simultaneously, characteristically fluctuate in intensity over time, and often alternate with lucid intervals. Secondary symptoms resulting from progressive brain dysfunction include incoherent speech, suspiciousness, delusions, auditory and visual hallucinations, emotional lability, and restlessness. The content of the secondary symptoms are determined by the patient's personality, previous experiences, and current environmental stimuli.[3] Diagnosis of brain syndrome is dependent on clinical evidence of the primary symptoms, with or without the more dramatic and troublesome secondary symptoms.

Etiologies

The etiologies of acute brain syndrome are myriad and include any biochemical, physiological, or structural insult that significantly interferes with cerebral function. An exhaustive list of these conditions is beyond the scope of this article, but the more common organic conditions are drug misuse, drug withdrawal, uremia, hepatic encephalopathy, infections, head trauma, vitamin deficiency, and cerebral vascular disease.[3] Frequently multiple factors are involved. For example, a patient may be generally debilitated from chronic illness, anoxic from compromised pulmonary function, and overmedicated. All of these summate as an organic brain syndrome.

Prompt recognition and treatment is imperative to avoid irreversible damage to the cerebrum. Predisposed, high-risk groups of patients include those addicted to alcohol or drugs, those with previous cerebral damage, those under considerable interpersonal stress, and particularly individuals 60 years old or older.[3,6] The vulnerability of the elderly group cannot be overstressed. They are frequently in marginal general health and nutrition and may have borderline senile cerebral changes. A brain syndrome may be precipitated by the stress of hospitalization alone, and more often by "routine" hospital medications. Iatrogenic brain syndrome from the multiple medications usually prescribed during inpatient services is not uncommon. This is aggravated by the practice of a list of standard orders for patients during hospitalization.

Incidence

The incidence of acute brain syndrome in a general hospital population is unknown. Reports as high as 40% have been found in first admissions in patients over 60 years old in psychiatric hospitals.[6] The statistics from psychiatric consultations from medical and surgical services estimate that from 10% to 15% of referrals are cases of unrecognized acute brain syndromes. This is a skewed sample, as a psychiatrist is usually not called until the patient's behavior is disturbed enough to initiate referral. At The University of Texas, acute brain syndromes account for approximately 10% of our referrals and the majority of the urgent consultations. In more than half of these cases, inappropriate medications have been the precipitating factor.

Clinical Presentations

Two brief case vignettes highlight some of the salient features of the clinical presentation:

A 70-year-old woman was transferred from her nursing home to the medical service at the Hermann Hospital for symptoms of urinary tract infection. The patient was taking multiple medications, including 200 mg of chlorpromazine (Thorazine) a day. Psychiatric consultation was sought because the patient was disturbing the rest of the ward. She was disoriented to time and place, had fluctuating levels of awareness, and attempted to make the unfamiliar hospital surroundings into familiar ones with delusional thinking. She talked about having seen me before, said that the hospital was her home, and mis-identified her doctors as being relatives. The house staff and the nursing staff were convinced that the patient was schizophrenic and were not willing to decrease her medication. She was transferred to the Psychiatric Service and ten days after discontinuation of all medication, she was alert, oriented, and felt better than she had in years. She left the hospital to live with her sister instead of returning to the nursing home.

A 75-year-old man who had been in good health all his life was hospitalized for prostatic infection. During hospitalization his speech was incoherent, he was extremely restless, and he was convinced that the medical staff was trying to poison him. He was discharged to his family in this condition with the statement that "there isn't anything else we can do." The patient was discharged with prescription for a moderate dose of antidepressant and sleeping medication. His condition was unchanged four weeks later when he was referred to our psychiatric unit. Upon admission, he was hyperactive, incoherent, hallucinating, and disoriented to time and place. He had recent and mid-memory deficit and his level of awareness fluctuated. He reported that the hospital and staff were familiar to him. The patient was taken off all medications and completely recovered in two weeks. Serial electroencephalograms demonstrated marked dominant activity slowing initially, with slow resolution to normal range as his cognitive impairment resolved.

Discussion

Two distinct stages of acute brain syndrome are usually recognizable. The first involves only the primary symptoms and frequently is not recognized by the medical staff. When questioned, the patient is usually not oriented to time or, often, to place and attempts to deal with his disorientation by making his surroundings familiar. He may remark, "Haven't I seen you before, doctor?" or interpret procedures or interactions in terms of something that happened in his past. This is in contrast to the rare delusional disorientation of the acute schizophrenic patient who attempts to explain his environment in a bizarre and disjointed way.[5] Such a patient once remarked, "I am Zeus, and this is the King-

dom Abdal; all unbelievers will die." An important characteristic of the organic patient is his evasiveness or attempts to conceal (even from himself) his intellectual deficits. Physicians are often embarrassed to pursue intellectual function test questions, particularly if the patient replies "of course I know the date." With gentle persistence the patient will usually demonstrate disorientation to time and often to place, and cannot repeat three unrelated items such as "green, canary, 1921" after a three- to five-minute interval. The patient has difficulty in concentrating and often has difficulty with simple subtraction. He often cannot pursue any topic without "drifting off." The nurses usually report that the patient seems to be "with it" at times, and at other times seems "confused." They may report that the patient is worse in the evenings, a time when sensory cues are decreased. The patient is not a behavioral problem during this stage of clouded consciousness, and may be extremely passive. The next stage, usually referred to as delirium if recognized, is characterized by incoherence, delusions, hallucinations, emotional lability, and hyperactivity. The patient is seen as uncooperative, dull, belligerent, or psychotic. Pressure is put on the doctor to control the patient's behavior and large doses of phenothiazines or sedatives are frequently administered. This often aggravates the patient's condition. At this point, the patient is labelled "crazy," and is considered to be unmanageable in the medical model. This may lead to an urgent request to have the patient transferred to the psychiatric unit. A differential diagnosis between organic brain syndrome and functional psychoses "schizophrenia and manic depressive illness" is a simple one. Functional psychosis is characterized by a clear sensorium, ie, where orientation and memory are preserved, and is only made in the absence of evidence of any brain dysfunction. While the secondary symptoms of organic brain syndrome can simulate any category of functional psychiatric illness, this syndrome can be readily identified by recognition of the primary symptoms. An additional aid to differential diagnosis is the EEG. This examination almost always shows a change in the dominant activity that parallels the degree of cognitive impairment. This is a relative slowing, however, and may only reduce a fast normal alpha rhythm to a slow normal one, and several EEGs may be necessary to document these changes.[1]

Early recognition of this condition is important to prevent the irreversible damage to the brain, and this can usually be accomplished by an awareness of the frequency of this disorder, simple inquiry into the patient's orientation and recent memory, and encouraging the nurses to look for the early primary symptoms of the problem.

Management

The hallmark of good management is early recognition and determination of the often multiple causes of cerebral impairment. Particularly, attention should be paid to the patient's hydration, general nutrition, electrolyte balance, and causes of cerebral anoxia. All drugs not absolutely necessary should be discontinued. Exacerbation of the primary symptoms and particularly the secondary symptoms of delusions, paranoia, and incoherence are related to decrease in sensory clues and an unfamiliar environment. These symptoms are frequently worse at night (sundown syndrome) and are aggravated by the change in nursing shifts and multiple physicians involved in patient care. It is often helpful to have a relative stay with the patient to reorient and reassure him. This can be best accomplished during the lucid intervals that punctuate the periods of cloudy consciousness. It is important to explain the organic etiology of the condition to the nursing staff so that they don't feel "deskilled" by "not knowing how to deal with a crazy patient." When properly informed,

the nursing staff manages these patients very well. The patient should be placed close to the nurses station for easy observation. It is helpful to keep lights on and to use the radio or TV to help orient the patient. Medication should not be used unless absolutely necessary. Small doses of thioridazine (Mellaril, 25 mg qhs), trifluoperazine (Stelazine, 2 mg three times a day) or sedating doses of a hypnotic like chloral hydrate may be employed. Restraints are to be avoided, but at times are required.[3] While some psychiatrists are unfamiliar with this syndrome,[4] psychiatric consultation by a liaison physician, if available, may be helpful because of their experience with this syndrome.

Summary

Clinical considerations of acute brain syndrome are reviewed with particular reference to the relative frequency, lack of recognition by medical personnel, uniformity of primary symptoms, and importance of early recognition and treatment to avoid permanent and serious complications are stressed.

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Dr. DeVaul, Assistant Professor of Medicine and Psychiatry, Chief of Liaison Service, The University of Texas Medical School at Houston, 6400 West Cullen, Houston, Texas 77025.

Maintenance of a functional eardrum in tympanoplasty procedures

Michael E. Glasscock, III, MD

The goal of any tympanoplasty procedure should be to return the tympanic membrane and ossicular chain to a near normal configuration. In doing so the functional results should improve.

Some of the normal anatomy and function of the tympanic membrane and ossicular chain, as well as principles of drumhead grafting, are discussed, and the two most popular methods of grafting are described. Problems associated with both techniques are reviewed as well. The best methods of maintaining a functional tympanic membrane are discussed in detail.

The transfer mechanism of the middle ear (tympanic membrane and ossicular chain) is frequently damaged in chronic ear disease. Since the early days of tympanoplasty there has been a gradual evolution of technique and functional results have improved.

This article reviews some of these events and discusses briefly the best methods for obtaining a functioning tympanic membrane graft.

A thorough discussion of the anatomy and physiology of the tympanic membrane is not within the scope of this article. For a fascinating explanation of this subject, the reader is referred to the early publications of Georg von Bekesy.[1] A brief review of this information is presented as a basis for the the rationale of tympanic membrane repair.

The normal eardrum is a conical, thin membrane separating the tympanic cavity from the medial end of the external auditory canal. The entire three-layer thickness of this structure is 0.1 mm. Its outer skin layer has no rete pegs (an important factor for overlay grafting techniques); the middle elastic portion consists of circumferential and radiating fibers; and the inner surface is covered with mucous membrane. The handle of the malleus is incorporated in this pars tensa and the umbo area corresponds to the deepest part of the cone. The surface area of the tympanic membrane is approximately 85 mm^2 but the effective vibrating surface is closer to 55 mm^2.

The purpose of the tympanic membrane is twofold. First, it acts as a barrier to foreign substances for protection of the tympanic cavity. Secondly, coupled with the ossicular chain, it is responsible for transferring acoustical energy from the air of the ear canal to the fluids of the cochlea. The membrane responds to a wide variety of sound intensities. A 1,000 Hz tone (at threshold) presented to the ear results in a displacement amplitude of 10^{-9} cm while a low-frequency tone at the threshold of feeling is about 10^{-2} cm. These low frequency vibrations of the tympanic membrane can be seen with the aid of the operating microscope. The drum displacements are determined more by the elasticity of the volume of air in the middle ear than the elastic properties of the drum itself.

The manner in which the drum vibrates is quite fascinating. At 2,000 Hz the normal tympanic membrane moves like a solid plate pivoted on an axis with its greatest amplitude at the lower edge (Fig 1). In Fig 1, the closed curves depict contours of equal amplitudes of displacement on a relative scale so that the smallest through the largest would be represented as 15, 10, 5, and 1. Therefore, the lower part of the drum would vibrate 15 times more than the upper part. The greater mobility of the drum at this point is due to a natural fold just above the lower fibrous annulus (Fig 2).

The sound waves striking the drum in

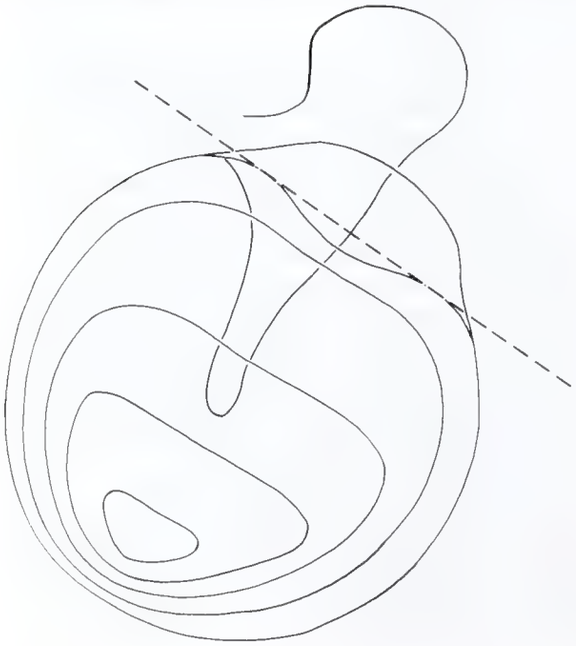
the form of air molecules must be amplified in order to overcome the high impedance of the cochlear fluids. The tympanic membrane and ossicles accomplish this by a combined hydraulic and lever effect. The surface area of the stapes footplate is 3.2 mm^2, therefore sound pressure exerted on the eardrum (55 mm^2) is transferred in a ratio of 17:1. There is added to this a slight mechanical advantage of 1.3:1 due to the lever effect of the ossicular chain. Therefore, the pressure at the footplate would be 22 times as great as that exerted on the tympanic membrane.

Principles of Tympanic Membrane Repair

Loss of part or all of the tympanic membrane as a result of chronic ear disease severely disrupts the transfer mechanism of the middle ear. Most central perforations, for instance, occur in the lower part of the eardrum where the greatest amount of vibration takes place.

In tympanic membrane repair and ossicular reconstruction it is important that the normal function of the drum and ossicular chain be thoroughly under-

1. At 2,000 Hz the normal tympanic membrane moves like a solid plate pivoted on an axis with its greatest amplitude at the lower edge. (after Bekesy)



2. The greater mobility of the tympanic membrane in its lower segment is due to a natural fold just above the inferior fibrous annulus. (after Bekesy)

stood. Grafting techniques should produce a new membrane that will correspond to the original as closely as possible. This means that the surface area must be similar and that the vibrating qualities ought to correlate well with the original drum.

To obtain maximum benefit, a malleus handle should be incorporated in the tympanic membrane. Ossicular repair would be most successful if it could simulate the normal chain.

Tympanoplasty procedures which can meet the majority of these requirements should be employed.

Grafting Techniques

While there are a myriad of different grafting procedures available to the otologic surgeon, there are two basic techniques that seem most popular. These are the overlay and the undersurface methods of tympanic membrane repair. At the present time both utilize fascia as a grafting material. Earlier, canal skin was employed in overlay procedures and vein was the primary material used in undersurface techniques. The undersurface procedure lends itself well to any connective tissue graft.

Of the two, the overlay procedure probably enjoys the greater acceptance. As described by Sheehy,[2] the canal skin is removed and the bony canal is enlarged. The outer layer of the drum is removed and the fascia graft is placed over the remnant. In cases with total loss of the drum, the graft is put under the handle of the malleus. The fascia is brought up the anterior canal wall slightly and the skin is returned to its original position. The ear canal is packed with Gelfoam.

In the undersurface procedure, the edges of the perforation are separated to form a raw surface and the fascia graft is placed under the drum remnant. Should the total tympanic membrane be missing, the annulus is treated in a similar manner and the graft placed under this structure. The canal skin is not removed and the anterior sulcus is not disturbed. Gelfoam is placed in the middle ear to support the graft. The fascia is usually placed under the manubrium of the malleus. This procedure may be performed through the ear canal[3] or through a postauricular approach.[4] At the end of the procedure, the canal is usually packed with Gelfoam or it may be filled with Neosporin ointment.

With the overlay technique, healing usually occurs within four to six weeks. The undersurface grafts are well epithelialized at one to three weeks.

Problems

No surgical procedure is without its problems. There are certain difficulties inherent in almost any operative technique.

The Overlay Technique

The primary difficulties encountered with the overlay procedure have to do with the quality of the resulting tympanic membrane. Blunting of the anterior sulcus is the most constant and bothersome complication of this technique. Should this be minimal and limited to a small area, it will not interfere with the vibrating qualities of the new drum. If, however, it is excessive, as in Fig 3, the malleus handle may be fixed, resulting in a reduced hearing level. Even if the malleus handle is not present, the blunting, if severe enough, re-

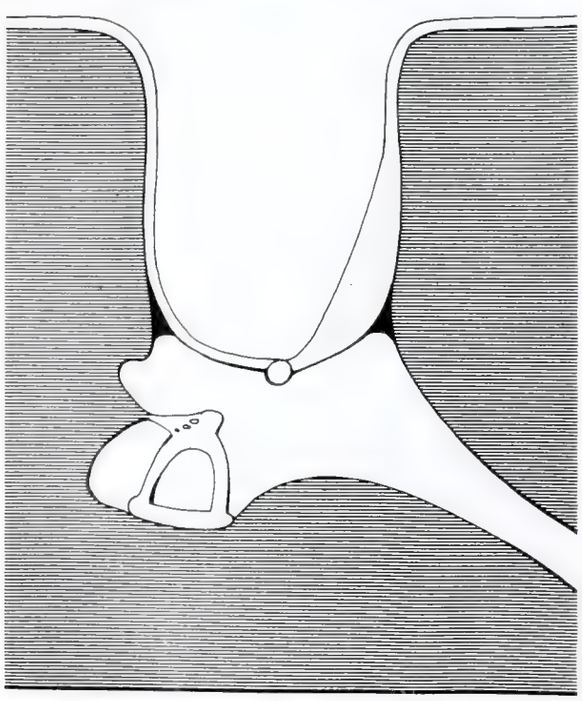
duces the vibrating surface of the new tympanic membrane. Another problem with the missing malleus handle is lateralization of the graft. This interferes with ossicular reconstruction as the distance between the tympanic membrane and stapes (footplate or superstructure) is greatly increased.

The incidence of delayed healing and graft cholesteatoma is higher in the overlay procedure as compared to the undersurface technique.

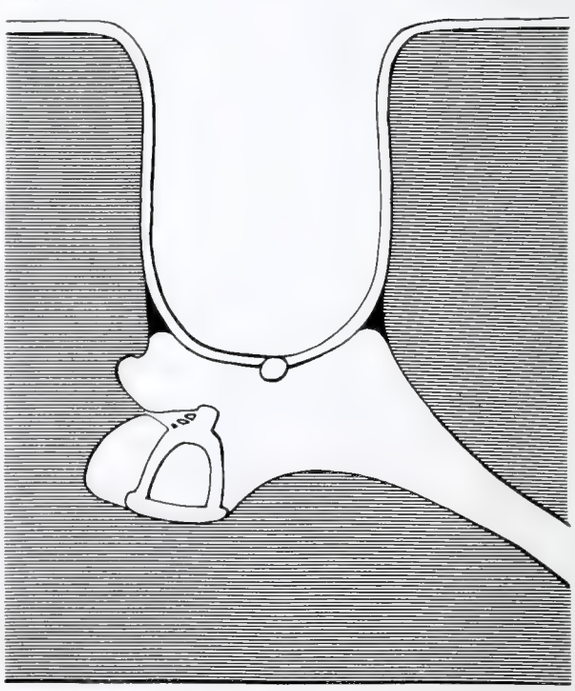
The Undersurface Procedure

The difficulties associated with this procedure have more to do with technical refinements than with poor healing. Transcanal undersurface grafting can be quite difficult in a small, tortuous canal. If the graft is not carefully placed beneath the drum remnant or annulus, a marginal perforation will occur. A common site of postoperative graft failure is in the anterior segment of the drum. This usually occurs because the anterior portion of the middle ear was not packed properly with Gelfoam. One method of preventing this complication is to pack the eustachian tube carefully so that the Gelfoam in this area will not slip into the tube and allow the graft to fall away. Since the canal skin is not disturbed, epithelialization is more rapid and there is no anterior blunting. In more than 480 primary cases grafted between April 1971 and December 1974, there have been no anterior sulcus blunting problems. In the face of a missing malleus handle, there has been no graft lateralization. Healing has uniformly occurred within a three-week period. There have

3. Severe blunting in the anterior sulcus fixes the malleus handle and reduces the vibrating surface of the new eardrum.



4. This normal configuration of the tympanic membrane can be more readily obtained postoperatively if an undersurface grafting technique is employed.



been no pearl formations in the postoperative tympanic membranes.

Discussion

During the past 20 years the results of tympanoplasty have greatly improved. It is important to understand how these events came about and why certain techniques have been abandoned or retained. The goal of tympanoplasty is to return a diseased ear to a healthy, functioning state. The resulting drum should look and act as much like the original as possible and the ossicular repair should simulate the mechanism of the chain as much as possible.

The early tympanoplasty procedures employed full and split thickness skin grafts over a denuded drum remnant.[5,6] There were numerous problems with these as the take rate was poor and postoperative drum cholesteatomas were common. Later, canal skin was used by House[7] and Plester.[8] This improved the results considerably, but these grafts still had to be used as overlays. In the early 1960s, vein[9,10] was used as grafting material. It had the advantage of being connective tissue and for the first time could be placed beneath the drum remnant. Fascia[11] as grafting material was introduced into the United States at about the same time. This tissue has continued to be used in both the overlay[2] and undersurface[3] techniques.

In the late 1960s, homograft tympanic membranes[12-16] were introduced in hopes of improving the functional results. Take rate was poor at first but has improved with time.

As grafting techniques have evolved in the past 20 years, so has the approach to ossicular chain repair. The early use of plastic and wire prosthetics has given way to autogenous[17] and homograft[7] ossicles and cartilage.[18] Newer methods of incus interpositioning[19,20] have increased hearing results considerably.

The need for ossicular repair was brought about in large part by the trend toward retaining the posterior canal wall. The early classification of tympanoplasty by Wullstein[6] depended upon a narrow middle ear cleft as one would expect with a modified radical mastoidectomy. Maintenance of the canal wall has required a method of connecting the new tympanic membrane to the superstructure or footplate of the stapes.

Anterior blunting (Fig 3) remains the major problem with the overlay procedure for most surgeons. It would appear that the tympanic membrane can be grafted and retain its functional shape (Fig 4) more readily with the oversurface approach.

The graft will not lateralize if the fascia is placed under the annulus. If there is no malleus handle present, however, the resulting drum will be flat and a poor anchor for a prosthesis in ossicular reconstruction. One way to solve this problem is to place a homograft malleus with part of its fibrous layer into the middle ear. The malleus head can be fixed in the attic with bone chips and the graft placed under the manubrium, which has been angled toward the promontory in its normal position. The resulting drum will have a similar appearance to the normal conical tympanic membrane. It will not have the exact vibrating qualities of the original, however, because it will not contain the normal fold at its lower edge. At a second stage procedure, the malleus head is amputated and removed from the attic. The ossicular chain is reconstructed using the

new malleus handle to stabilize the prosthesis.

The future for tympanoplasty is bright. There are many refinements in technique being developed each year. Tissue glues and homograft ossicles may someday allow the otologic surgeon to completely replace the ossicular chain with good functional success. At the present time, it would appear that the more normal appearing and functioning grafts are obtained with the undersurface fascia procedure. New grafting techniques and materials will become available in the years to come.

While the state of the art has greatly improved as compared to the early work of Zollner and Wullstein, there is much yet to be done in perfecting a functional tympanoplasty procedure. It would be a mistake to assume that current tympanoplasty results are the best that can be achieved. Otologic surgeons must continue to improve their techniques and review their results critically.

Summary

Loss of the tympanic membrane due to chronic ear disease interferes with the normal transmission of sound to the cochlear fluids. Functional repair of the eardrum is required to better simulate this transfer mechanism.

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Dr. Glasscock, 1811 State Street, Nashville, TN 37203.

Technetium stannous pyrophosphate myocardial scintigraphy for diagnosing and localizing acute myocardial infarcts

Physicians have depended on serial electrocardiograms, certain serum enzyme alterations, and a specific clinical history to make a diagnosis of acute myocardial infarction in patients in the past. However, identifying subendocardial myocardial infarction from the electrocardiogram alone is difficult if not impossible. In addition, in patients with left bundle branch block and in some with a previous myocardial infarction, recognizing a new myocardial infarction from the ECG is also very difficult. Some other patients have either a rapid or a delayed evolution of their ECG after infarction, again making its recognition troublesome. Elevations of most cardiac enzymes are nonspecific indications of myocardial infarction, and might also result from hemolysis, congestive heart failure, brain or pulmonary damage, intramuscular injections, or other causes. Therefore, the development of new, relatively noninvasive diagnostic techniques that might help to establish the presence of acute myocardial infarction with additional certainty, as well as identify its exact location and perhaps even its size, would be most welcome.

Recently we have described the ability of technetium stannous pyrophosphate (^{99m}Tc-PYP) myocardial scintigraphy to directly identify the presence and exact location of acute myocardial infarction in patients.[1-4] Certain other myocardial scintigraphic techniques were described before our recent myocardial imaging studies with technetium stannous pyrophosphate. Agents utilized in the past for myocardial imaging have included technetium-99^{m} tetracycline, potassium-43, glucoheptonate, gallium-67, cesium-29, and long-chain fatty acids.[5-10] However, the relatively high cost of some of these agents, the fact that some have less than an ideal abnormal-normal myocardial tissue ratio, that some identify normal myocardium leaving abnormal myocardium as a void, that some concentrate heavily in the liver making the identification of acute inferior myocardial infarction difficult, and that some require intracoronary injections have limited their clinical usefulness.

Additionally, in the case of tetracycline, the myocardial images are not positive until 24 hours after infarction, and an additional 24 hours after the injection of ^{99m}Tc-tetracycline is necessary for optimal imaging concentration in the infarct. ^{99m}Tc-PYP appears to be an ideal agent for the performance of myocardial scintigrams and to have certain advantages over some of the radionuclides that were used in the past for myocardial imaging. It is given intravenously, which is a major advantage over any other radionuclide that requires intracoronary injection for myocardial imaging. It also appears to be safe, is relatively inexpensive, and it has a relatively short half life of approximately six hours, thereby allowing scintigrams to be repeated daily if necessary. In addition, the ^{99m}Tc-PYP identifies the exact area of damage in the heart and the scintigrams are positive within 12 hours after myocardial infarction. Finally, extensive experience utilizing ^{99m}Tc-PYP to identify myocardial infarction in patients has recently been obtained at our institution.[1-3]

This article emphasizes several factors important for the optimal utilization of this

James T. Willerson, MD
Robert W. Parkey, MD
Frederick J. Bonte, MD
Ernest M. Stokely, PhD
L. Maximilian Buja, MD

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myocardial imaging technique. Our statements are based on myocardial imaging studies that have been done utilizing ^{99m}Tc-PYP to perform myocardial scintigrams in more than 300 patients admitted to our Coronary Care Unit with chest pain of varying etiology during 16 months.

There appears to be no question that almost every patient with an acute transmural myocardial infarct admitted to Parkland Memorial Hospital in Dallas has a positive ^{99m}Tc-PYP myocardial scintigram when imaged 12 hours to six days following myocardial infarction (Fig 1). The scintigrams tend to become negative or much less positive beginning approximately six or more days after myocardial infarction in the majority of patients, but in some they remain faintly positive for even longer periods of time.

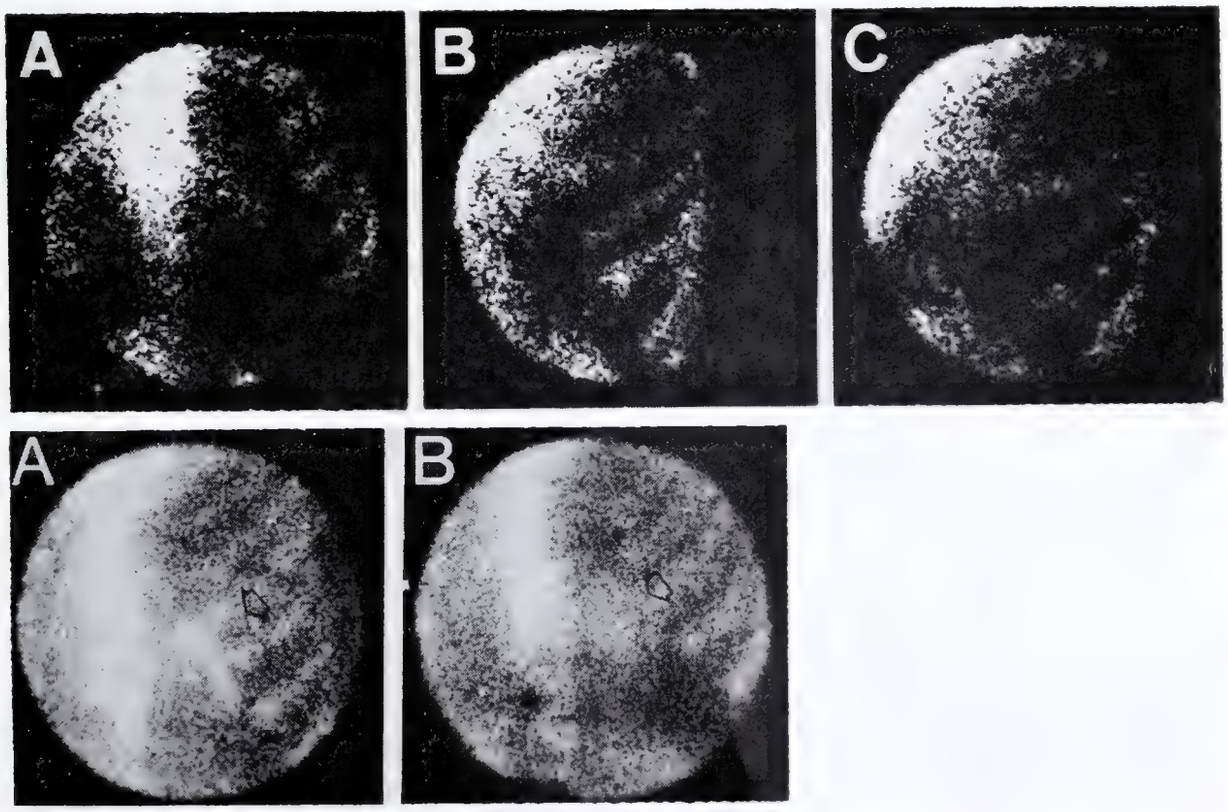
In our present series that includes 150 patients with acute transmural myocardial infarcts, only three patients imaged within the appropriate time periods had negative ^{99m}Tc-PYP myocardial scintigrams. Two of these patients had acute inferior myocardial infarcts and the other a true posterior myocardial infarct by clinical, electrocardiographic, and enzymatic parameters, but none of the three had a positive ^{99m}Tc-PYP myocardial scintigram despite repeated studies. That a rare patient with a small acute inferior myocardial infarct might have a negative ^{99m}Tc-PYP myocardial scintigram is understandable when one realizes that the characteristic scintigraphic appearance of this type of infarct is a plate-like area of increased ^{99m}Tc-PYP uptake along the diaphragmatic aspect of the heart. We have noted variations in the apparent scintigraphic size of inferior infarcts utilizing this imaging technique, so that in some instances only a small area of increased ^{99m}Tc-PYP uptake is apparent along the diaphragmatic aspect of the heart, and in other cases the area of damage appears to be much more extensive. In the two patients with negative scintigrams and acute inferior myocardial infarcts, as well as in the one with an acute true posterior infarct, the negative scintigraphic findings may have been caused by the occurrence of small areas of myocardial damage or by the site of localization of the infarcts. If the infarcted myocardium was localized along the "line of sight" of the Anger camera rather than perpendicular to it, then the currently used myocardial imaging projections (anterior, left lateral, and left anterior oblique) might fail to disclose such an area of increased ^{99m}Tc-PYP uptake. An analogy would be looking at a plate on edge at eye level so that it appears as a straight line as opposed to turning the plate perpendicular so that it appears as a circular disc. It may be possible to solve this problem in the rare patient in whom it occurs by adding a cephalad angulated view to allow one to see the true extent of the inferior myocardial infarction. Apart from the three patients discussed, the remaining patients with acute transmural myocardial infarcts imaged within the appropriate time periods have had positive ^{99m}Tc-PYP myocardial scintigrams. It appears to us, then, that the incidence of false negative ^{99m}Tc-PYP myocardial scintigrams in patients with acute transmural myocardial infarcts is very small (approximately 1 to 2%) when the appropriate myocardial imaging times are observed.

Three patients with acute transmural myocardial infarcts in our series developed clinical and ECG evidence suggestive of extension of their myocardial infarcts ten days to two weeks after their initial attack. In each case, ^{99m}Tc-PYP myocardial scintigrams documented the extension.

In utilizing this myocardial imaging technique it is important to remember that the ^{99m}Tc-PYP myocardial scintigrams tend to become increasingly more positive between 12 and 48 hours following the onset of infarction. We have shown in experimental animals that these scintigraphic findings correlate with the occurrence of progressively increasing calcification of irreversibly injured muscle cells within the peripheries of infarcts during the period when the scintigrams are becoming increasingly positive.[11,12] Correlation of the scintigraphic and pathologic findings has provided strong support for the view that the scintigraphic detection of acute myocardial infarcts with ^{99m}Tc-PYP results from concentration of the radionuclide in the infarcts, possibly mediated by incorporation of the agent into calcific deposits. The mechanism(s) responsible for progressive calcium deposition in infarcts over time require further elucidation, but appear to involve phenomena related to progressive evolution of infarction and progressive increase in coronary collateral circulation in areas of myocardial damage. Nevertheless, the time course of the scintigraphic findings has obviously important implications

1. Top panel: A negative technetium-99m stannous pyrophosphate myocardial scintigram is shown. A, anterior view; B, left anterior oblique view; C, left lateral view. Note the uptake of the technetium-99m stannous pyrophosphate in sternum, ribs and vertebral column, but the absence of uptake in the region of the heart.

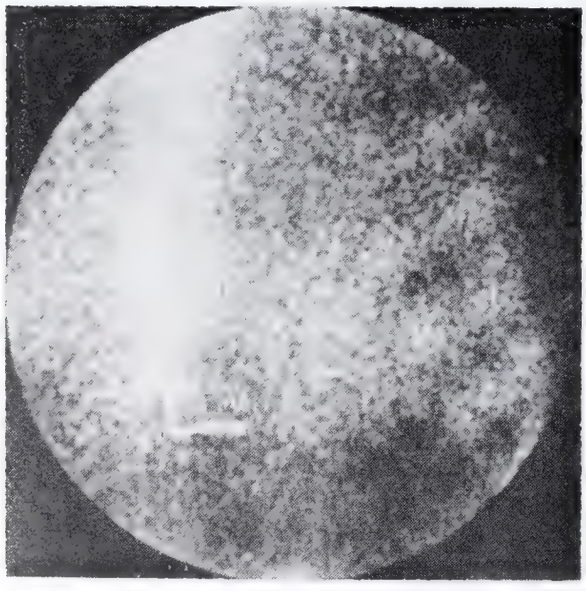
Bottom panel: A positive technetium-99m stannous pyrophosphate (^{99m}Tc-PYP) myocardial scintigram obtained from a patient with an acute anteroseptal myocardial infarction. A, increased uptake of the radioactive material (designated by the arrow) four days after infarction; B, the increased uptake of the ^{99m}Tc-PYP is beginning to fade 18 days after infarction.



in terms of recognizing and sizing myocardial infarcts, since the presence of infarcts might be inapparent or only equivocally apparent scintigraphically at 12 hours, but be very obvious 24 to 48 hours after the onset of infarction. Therefore, ^{99m}Tc-PYP myocardial scintigrams should be repeated at least once if the initial scintigram obtained just a few hours after the possible onset of infarction is negative or equivocal and if clinical suspicion regarding the presence of a myocardial infarct is relatively great.

Acute subendocardial myocardial infarcts also can be detected using ^{99m}Tc-PYP myocardial scintigrams.[2,3] The most common myocardial scintigraphic pattern with this type of infarct is one of faint and diffuse ^{99m}Tc-PYP uptake, making exact localization and probably even sizing difficult in most instances (Fig 2). A few patients with acute subendocardial myocardial infarcts have localized and intensely positive ^{99m}Tc-PYP scintigrams in a pattern similar to that noted in patients with acute transmural myocardial infarcts.[2] To date, patients with ECGs consistent with a diagnosis of subendocardial infarction and histories and enzyme changes that are compatible with that diagnosis have had positive ^{99m}Tc-PYP myocardial scintigrams. However, it seems likely that an occasional patient with subendocardial infarction may have such limited and diffuse damage that he might have a negative scintigram. The exact frequency with which false negative scintigrams occur in patients with acute subendocardial myocardial infarcts will not be known until the results of postmortem and ^{99m}Tc-PYP myocardial scintigraphic data are compared in a sizable number of suitable patients.

2. A positive ^{99m}Tc-PYP myocardial scintigram obtained from a patient with an acute subendocardial myocardial infarction. Note the characteristic faintly positive and diffuse uptake of the ^{99m}Tc-PYP myocardial scintigram seen in the patient.



Approximately one-third of our patients with "unstable angina pectoris" and cardiac catheterization-proven coronary artery disease have positive ^{99m}Tc-PYP myocardial scintigrams in a pattern suggestive of subendocardial necrosis[3,13] (Fig 3). Positive myocardial scintigrams occurred in these patients even though they had only equivocal or negative ECGs and cardiac enzymes, raising the question as to whether the ^{99m}Tc-PYP scintigrams are in some instances more sensitive than ECGs and enzymes in recognizing myocardial necrosis. We also have observed positive ^{99m}Tc-PYP myocardial scintigrams in two patients with coronary artery disease and ventricular aneurysms, but without recent clinical evidence of myocardial infarction, who demonstrated increased ^{99m}Tc-PYP uptake in the area of their ventricular aneurysms. Findings in these two patients suggest that ^{99m}Tc-PYP myocardial scintigrams may remain positive indefinitely in some patients when ventricular aneurysms develop after myocardial infarction. In our series of more than 300 patients, we also have observed

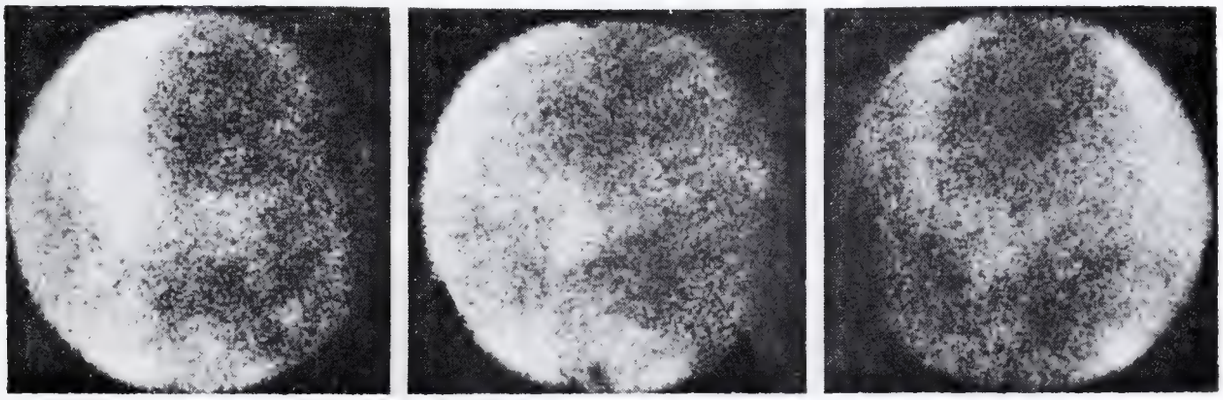
four patients admitted with chest pain but without unstable angina pectoris, who did not evolve ECG or enzyme evidence of infarction, but who did have positive ^{99m}Tc-PYP myocardial scintigrams. Two of these four patients underwent coronary arteriography subsequently and had normal coronary arteries. These four patients may have had false-positive scintigrams. If they did and if all of the patients we have studied with "unstable angina pectoris" also had false-positive scintigrams, then the incidence of false-positive tests is approximately 8-10%.

In our experience there are certain instances in which extracardiac uptake of ^{99m}Tc-PYP occurs; this increased uptake might rarely present a problem as far as the correct interpretation of the presence of myocardial damage is concerned. In particular, rib fractures, metastatic neoplastic disease to the ribs, and lactating breasts in premenopausal females might occasionally present a problem as far as the precise identification of increased myocardial uptake of ^{99m}Tc-PYP is concerned. However, if all three projections are utilized and if one pays particular attention to the area over the heart, following rib margins carefully, then confusion regarding increased myocardial uptake of ^{99m}Tc-PYP versus extramyocardial uptake of the radionuclide rarely should be a problem.

The final point that we would like to stress is that one needs to wait approximately one hour following the intravenous injection of ^{99m}Tc-PYP before obtaining the myocardial scintigrams. If scintigrams are performed sooner, there is still enough "radioactive blood pool" in some patients to make precise identification of increased localized myocardial uptake of ^{99m}Tc-PYP difficult. In a rare patient, the "radioactive blood pool" image still persists even if one waits one hour or slightly longer before obtaining the images, thus demonstrating that in an occasional patient one might have to obtain additional myocardial scintigrams several hours after the injection of ^{99m}Tc-PYP to be certain that the "radioactive blood pool" effect no longer persists.

The exact usefulness of this myocardial imaging technique as far as its ability to diagnose, localize, and size acute myocardial infarcts will have to be established by many different investigators in studies done in the future. In our hands, however, this myocardial imaging technique has been of great help in recognizing both acute transmural and subendocardial myo-

3. A positive ^{99m}Tc-PYP myocardial scintigram obtained from a patient with "unstable angina pectoris." Notice that the pattern of the ^{99m}Tc-PYP scintigram is similar to that seen in patients with acute subendocardial infarction.



cardial infarcts, in localizing acute transmural infarcts, and in recognizing extension of myocardial infarction when it occurs.

Acknowledgment

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Dr. Willerson, Ischemic Heart Disease Center, L5-134; Drs. Parkey, Bonte, and Stokely, Department of Radiology; Dr. Buja, Department of Pathology; The University of Texas Southwestern Medical School, 5323 Harry Hines Boulevard, Dallas, Texas 75235.

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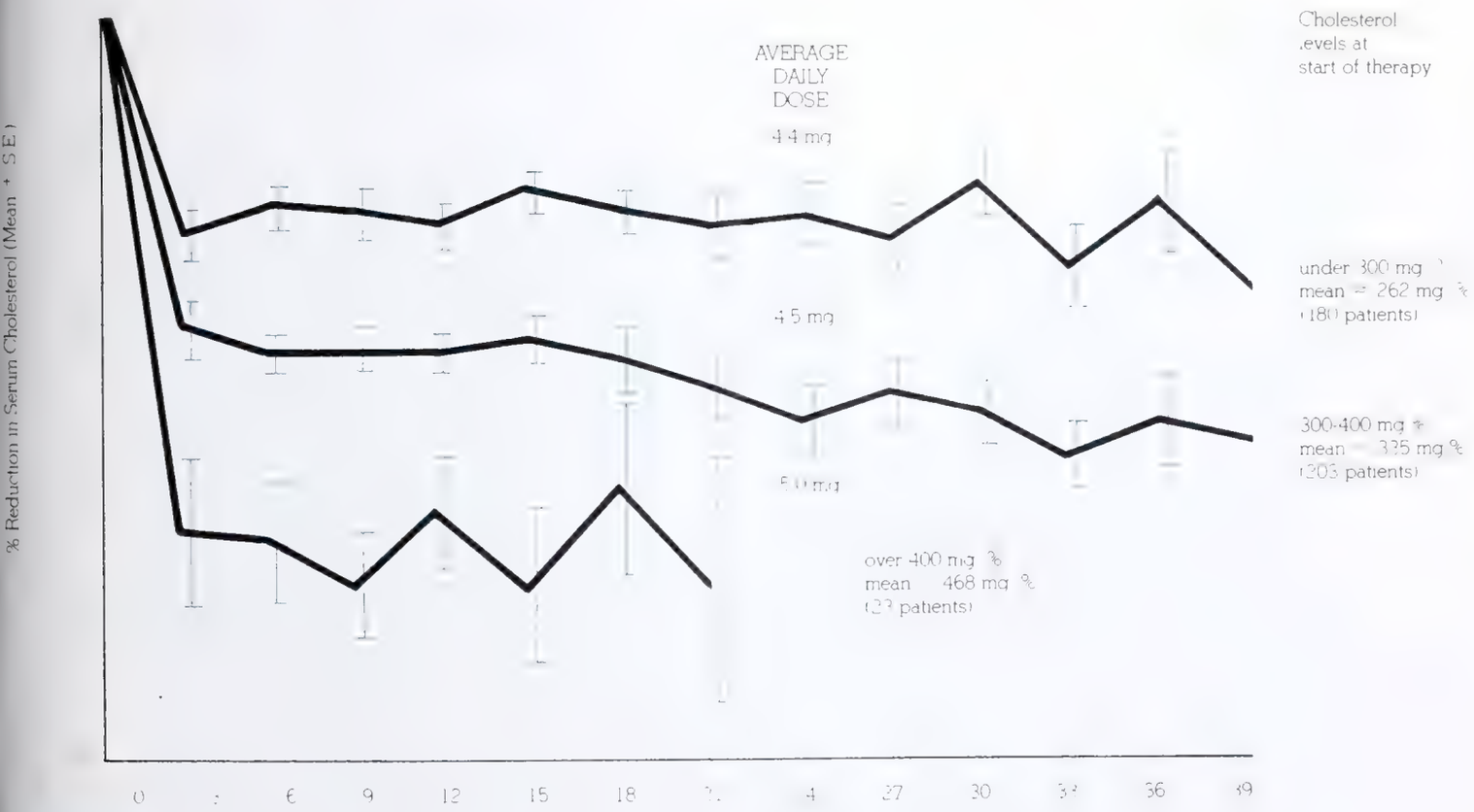

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	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1 0-2 0 mg	1 0 2 0 mg	4 0-8 0 mg	4 0-8 0 mg
Pediatric Hypercholesterolemic	0 05 mg /kg body weight	0 05 mg /kg	0 1 mg /kg body weight	4 0 mg
Hypothyroid Cardiac	0 5-1 0 mg	1 0 mg	4 0 mg	4 0 mg

Description
CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine. It is chemically described,as D-3,5,3',5'-tetraiodothyronine sodium salt.

Actions
The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients. Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels.

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces. Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood.

Indications
This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease.

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication. **Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN (sodium dextrothyroxine) is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN (sodium dextrothyroxine) dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.**

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications
The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated:

1. Known organic heart disease including angina pectoris, history of myocardial infarction, cardiac arrhythmia or tachycardia either active or in patients with demonstrated propensity for arrhythmias, rheumatic heart disease, history of congestive heart failure, and decompensated or borderline compensated cardiac status
2. Hypertensive states (other than mild labile systolic hypertension)
3. Advanced liver or kidney disease
4. Pregnancy
5. Nursing mothers
6. History of iodism

Warnings
CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN (sodium dextrothyroxine) therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN (sodium dextrothyroxine) therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated.

When CHOLOXIN (sodium dextrothyroxine) is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease, treatment should be initiated with care. Special consideration of the dosage schedule of CHOLOXIN (sodium dextrothyroxine) is required. This drug may increase the oxygen requirements of the myocardium, especially at high dosage levels. Treated subjects with coronary artery disease must be seen at frequent intervals. If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients, the dosage should be reduced or the drug discontinued.

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN (sodium dextrothyroxine). As with all thyroactive drugs, hypothyroid patients are more sensitive to a given dose of CHOLOXIN (sodium dextrothyroxine) than euthyroid patients.

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency. This condition may be enhanced in patients receiving thyroid analogues. These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease.

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN (sodium dextrothyroxine) in euthyroid patients at least two weeks prior to an elective operation. During emergency surgery in euthyroid patients and in surgery in hypothyroid patients in whom it may not be advisable or possible to withdraw therapy, the patients should be carefully observed.

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents. Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs. If sodium dextrothyroxine is later withdrawn from patients who required an increase of insulin (or oral hypoglycemic agents) dosage during its administration, the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state.

When either or both impaired liver or kidney function are present, the advantages of CHOLOXIN (sodium dextrothyroxine) therapy must be weighed against the possibility of deleterious results.

Usage in Women of Childbearing Age
Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug, it can be given to those patients exercising strict birth control procedures. Since pregnancy may occur despite the use of birth control procedures, administration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother. Teratogenic studies in two animal species have resulted in no abnormalities in the offspring.

Precautions
It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels. These increased serum PBI values are evidence of absorption and transport of the drug, and should NOT be interpreted as evidence of hypermetabolism; similarly they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine). PBI values in the range of 10 to 25 mcg% in treated patients are common.

If signs or symptoms of iodism develop during CHOLOXIN (sodium dextrothyroxine) therapy, the drug should be discontinued.

A few children with familial hypercholesterolemia have been treated with CHOLOXIN (sodium dextrothyroxine) for periods of one year or longer with no adverse effects on growth. However, it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed.

Adverse Reactions
The side effects attributed to dextrothyroxine therapy are for the most part due to increased metabolism, and may be minimized by following the recommended dosage schedule. Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease; the incidence of adverse effects is increased in hypothyroid patients, and is highest in those patients with organic heart disease superimposed on the hypothyroid state.

In the absence of known organic heart disease, some cardiac changes may be precipitated during sodium dextrothyroxine therapy. In addition to angina pectoris, arrhythmia consisting of extrasystoles, ectopic beats, or supraventricular tachycardia, ECG evidence of ischemic myocardial changes and increase in heart size have been observed. Myocardial infarctions, both fatal and non-fatal, have occurred, but these are not unexpected in untreated patients in the age groups studied. It is not known whether any of these infarcts were drug related.

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia, nervousness, palpitations, tremors, loss of weight, lid lag, sweating, flushing, hyperthermia, hair loss, diuresis, and menstrual irregularities. Gastrointestinal complaints during therapy have included dyspepsia, nausea and vomiting, constipation, diarrhea, and decrease in appetite.

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness, visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints. Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators. Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient although its relationship to CHOLOXIN (sodium dextrothyroxine) therapy was not established.

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN (sodium dextrothyroxine), a worsening of peripheral vascular disease, sensorium, exophthalmos, and retinopathy have been reported.

CHOLOXIN (sodium dextrothyroxine) potentiates the effects of anticoagulants, such as warfarin or Dicumarol on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants. On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section).

Dosage and Administration
For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day. The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol.

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage. The maximum in patients receiving digitalis therapy is 4 mg.

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is approximately 0 1 mg (100 mcg) per kilogram. The initial daily dosage should be approximately 0 05 mg (50 mcg) per kilogram to be increased in up to 0 05 mg (50 mcg) per kilogram increments at monthly intervals. The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol.

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn.

How Supplied
CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4 and 6 mg tablets.

March 1975

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Use of Auto Sutures in gastrointestinal surgery

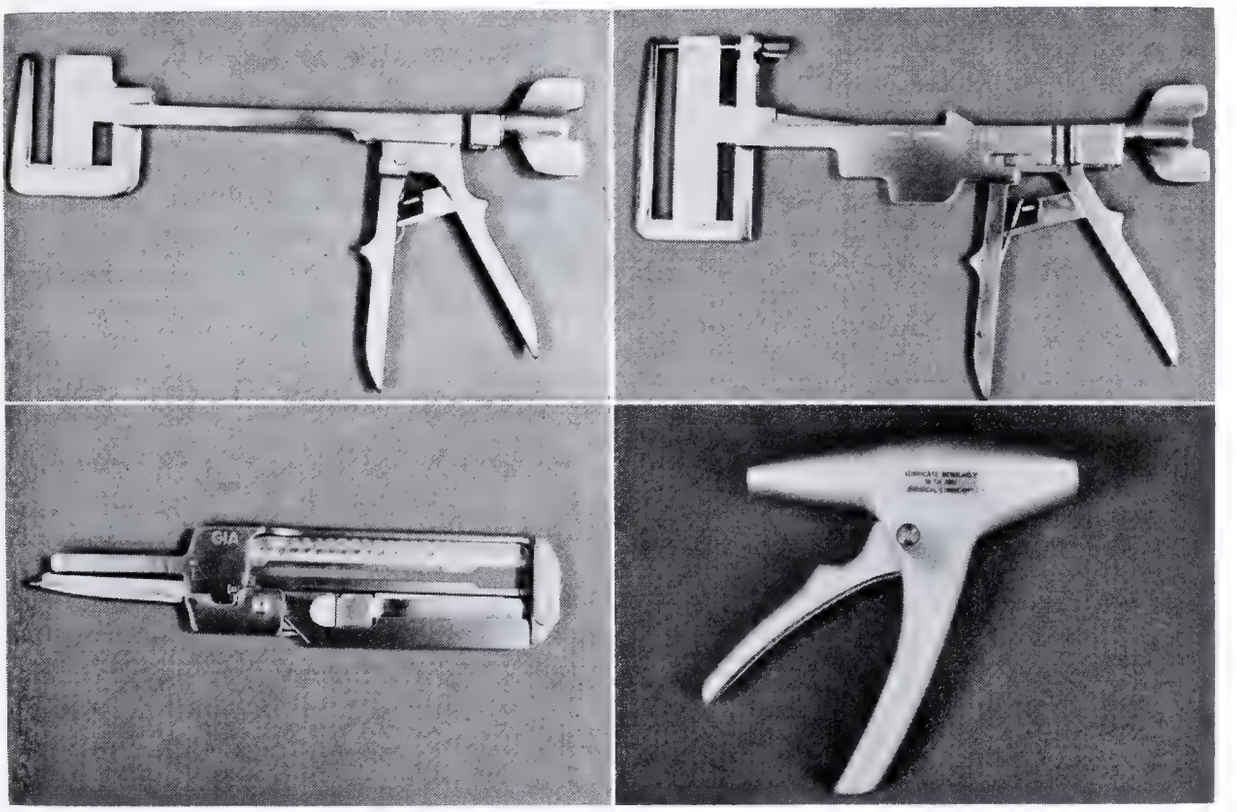
William J. Hardin, MD

The original Auto Suture instruments were devised at the Scientific Research Institute for Experimental Surgical Apparatus and Instruments in Moscow and were introduced in the United States by Dr. Mark Ravitch after he had visited Russia. The United States Surgical Corporation perfected the instruments and made them available to surgeons in this country nearly a decade ago. In 1967, approximately 10,000 operations were performed using the instruments. By 1974, between 200,000 and 250,000 procedures were performed using the instruments, and it is estimated that 400,000 to 500,000 such procedures were performed in 1975. About 2,600 major hospitals in the United States have Auto Suture instruments, and about half of the medical schools in this country are using them. In Texas, 75 hospitals have the instruments for their staffs.

It is imperative that surgeons understand the use of Auto Suture instruments and the results that can be anticipated. Moreover, physicians will be seeing more patients who have had procedures performed with Auto Sutures, and it is mandatory that they understand the instruments. Although the instruments are versatile and are used in nearly all types of operations, the emphasis of this article is on gastrointestinal surgery.

Description of Instruments

Some of the instruments that are available are shown in Fig 1. The designation "TA" stands for "thoracoabdominal" and means



1. Auto Suture surgical instruments. Upper left: TA-55, used for duodenal closure. Upper right: TA-90, used for suturing of stomach. Lower left: GIA, used to perform anastomosis. Lower right: fascia and skin closure instrument.

that the instrument can be used in thoracic and abdominal procedures. The numeral after the TA prefix indicates the length of the jaws, in millimeters, that clamp the intestine or other organ that is being stapled. For example, in adult gastrointestinal surgery, the TA-55 is used to place a double layer of stainless steel clips across the duodenum or any other piece of small intestine because it will compress a piece of bowel 55 mm in diameter. The TA-90 is used to place a double layer of clips across the stomach.

"GIA" indicates "gastrointestinal anastomosis," and this instrument is used to anastomose adjacent pieces of intestine. The fascia and skin closure instrument is a single instrument that uses stainless steel clips of different sizes—a larger clip for the fascia and a smaller one for the skin.

The TA-30 and TA-55 instruments can be loaded with stainless steel sutures that are either 3.5 or 4.8 mm long; the former are used on tissue that compresses to approximately 1.5 mm thick, and the latter are used on tissue that compresses to approximately 2 mm thick. The TA-90 instrument uses only 4.8-mm sutures.

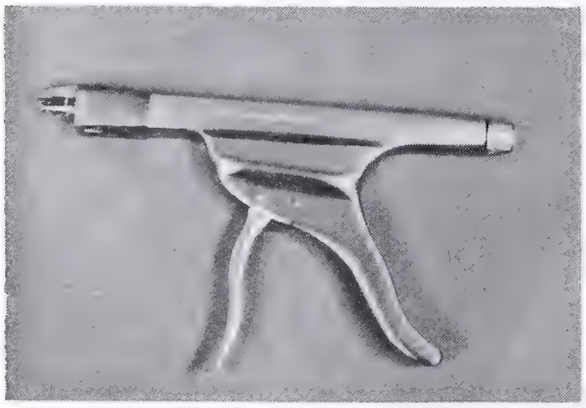
The LDS instrument (ligate, divide, and suture) (Fig 2) saves many steps by placing hemostatic steel clips on vessels of the omentum or mesentery and cutting between them. A special instrument (Fig 3) is available for removing the sutures.

Application in Gastrointestinal Surgery

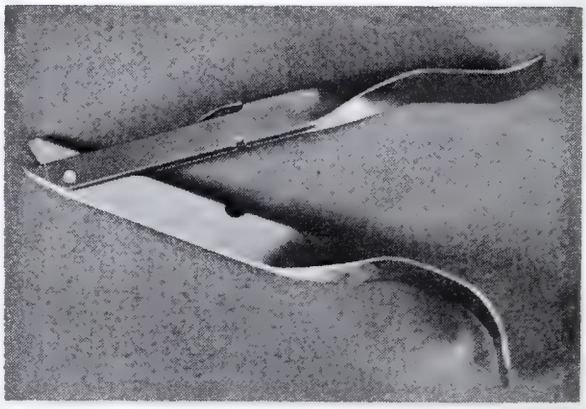
Although there are other procedures in which Auto Sutures are applicable, those listed in Fig 4 are the ones with which I have had experience.

The technique is simple. The LDS instrument is used to divide the gastrocolic and gastrohepatic ligaments. The TA-90 instrument is placed across the stomach and then closed and compressed; this inserts two layers of hemostatic stainless steel sutures. Kocher's clamps are placed distal to the compressed instrument, and the stomach is transected. The distal portion of the stomach is used for traction on the duodenum, and the TA-55 instrument is placed across the duodenum distal to the pylorus. It is compressed to close the duodenum with a double layer of hemostatic sutures. The specimen is amputated above the sutures. The jejunum distal to the ligament of Trietz is prepared for a Billroth II anastomosis by tacking it to the posterior wall of the stomach 3 cm proximal to the stomach transection. The GIA instrument is inserted into stab wounds in the stomach and jejunum and is closed,

2. LDS Auto Suture surgical instrument, used to ligate and divide omental and mesenteric vessels.



3. Suture removal instrument.



which pushes forward the knife, inserts four layers of steel sutures into the stomach and jejunum, and cuts between them to create an anastomosis. The size of the stoma is determined by the depth of insertion of the instrument. The maximal diameter of the anastomosis is 5 cm. After the GIA instrument is removed, the stab wounds are closed with a TA-30 instrument or manually. Routine peritoneal closure is performed. The fascia and skin are closed with the fascia and skin closure instrument.

Results

In my experience with Auto Sutures, gastric surgery was the only type of which there were enough cases to permit evaluation of results. Of the 41 such operations performed with Auto Sutures, the largest number were for duodenal ulcer (Fig 5). Auto Sutures have not been used in all cases of gastric surgery, and so there has been some degree of patient selection. The most commonly performed procedure was vagotomy, antrectomy, and Billroth II (Fig 6).

At follow-up, ranging from 8 to 40 months postoperatively, results were satisfactory in 33 cases. Four patients had died from their malignancy and two were living but had malignancy. Results were unsatisfactory in two cases but were not related to the use of staples (multiple medical problems in one and possible mild dumping syndrome in the other).

Operating time varied from 50 to 290 minutes, the longer cases being the more complicated resections. Postoperative recovery seemed to be more rapid than in similar cases in which manual anastomosis had been used. The nasogastric tube was removed at an average of 2.7 days; in 22 of 41 patients, the tube was taken out on the second postoperative day. On the average, a liquid diet was started at four days and a regular diet was started at 6.2 days. The average hospital stay was 11.5 postoperative days; all hospitalizations for longer than 14 days were because of medical problems and not because of delayed recovery of gastrointestinal function.

One advantage of the use of Auto Sutures was the minimal bleeding from the anastomoses: nasogastric aspirates were blood-free in most cases by the time the patient arrived in the recovery room and were blood-free by the first postoperative day in 40 of the 41 cases. One patient had blood in the nasogastric tube for three days. The instruments were safe. No direct complications, such as bleeding anastomoses, anastomotic leaks, or duodenal stump leaks, developed. One patient had delayed gastric emptying but recovered after three weeks on a liquid diet.

One patient required early reoperation because of a leaking gastroenterostomy manifested by abdominal tenderness on

4. Procedures in which the author has used Auto Suture instruments.

Stomach
Resection
Bypass
Pancreas
Multiple bypasses for cancer (cholecystojejunostomy, jejunojejunostomy, gastrojejunostomy)
Multiple bypasses for chronic pancreatitis
Distal pancreatectomy
Total pancreatectomy for cancer (gastrointestinal anastomoses)
Whipple procedure
Small intestine
Resection (tumor, inflammatory bowel, trauma, intussusception)
Bypass for carcinomatosis
Jejunoilial bypass for obesity
Resection of Meckel's diverticulum
Cholecystectomy
Appendectomy (incidental)
Colon
Right hemicolectomy
Sigmoidectomy
Low anterior colon resection
Total colectomy with ileorectal anastomosis
For diverticular disease
For inflammatory bowel disease
Abdominoperineal resection of rectum
Any skin closure (abdomen, chest, leg, breast, hernia)

the seventh postoperative day. Reexploration revealed that leakage had occurred at the site of the manual closure of the stab wounds in the stomach and jejunum; the anastomosis performed by the stapling instrument was completely watertight. Another patient required late reoperation for volvulus of the efferent loop, which, again, was not related to the anastomosis performed by the instrument.

One patient had a wound infection, for an infection rate of 2.4%. The number of cases is too small for this to be a valid estimate of infection rate.

Comment

Although I have not performed as many other procedures as gastric resections, I have been impressed by the wide applicability of these instruments and by their safety. The TA-55 has been used for compression and suturing of the pancreas in distal pancreatectomy and in none of these cases has a pancreatic fistula developed. Many patients with abdominal carcinomatosis have undergone palliative side-to-side bypasses performed with the GIA instrument. An anastomosis with this instrument can be performed in slightly more than one minute.

The LDS instrument has been used for vagotomy (in place of silver clips), for cholecystectomy (to ligate and divide the cystic duct and artery), and for incidental appendectomy but not in acute appendicitis. Any type of bowel resection and anastomosis can be performed with the instruments, but the application is wider in small bowel surgery than in colonic surgery because of difficulty in working in the pelvis with the large instruments.

Roentgenographically, one cannot determine that an anastomosis has been performed with the instruments except by seeing the stainless steel clips. In most cases, the radiologist did not mention the clips but only commented on a normal postoperative anastomosis. The appearance at postoperative gastroscopy has been that of normal anastomoses, indistinguishable from the manual anastomoses.

No wound disruptions have occurred when the fascia was closed with the instrument, but the number of cases is small. The wounds are cosmetically attractive after the skin sutures have been removed. Besides abdominal closures, I have used the skin closure instrument on breast and extremity incisions and have been satisfied.

5. Indications for gastric resection with Auto Sutures in 41 patients.

Indication		No.
Duodenal ulcer		22
Intractable	7	
Obstruction	11	
Bleeding	3	
Perforation	1	
Gastric ulcer		15
Benign	7	
Malignant	8	
Partial gastrectomy	6	
Total gastrectomy	2	
Marginal ulcer		3
Gastrojejunocolic fistula		1

6. Procedures used in 41 gastric operations.

Procedure		No.
Vagotomy, antrectomy, Billroth II		23
Hemigastrectomy, Billroth II		7
Hemigastrectomy, Billroth I		1
Complicated gastrectomy*		8
Higher gastric resection	5	
Total resection including spleen, pancreas, jejunum	2	
Gastrojejunocolic fistula	1	
Vagotomy, gastrojejunostomy		2

*Reoperation for marginal ulcers or total gastrectomy.

Summary

Personal experience with the Auto Suture surgical instruments has been reviewed. The instruments have wide application and are safe. It is not suggested that Auto Sutures completely replace manual anastomoses in gastrointestinal surgery, but surgeons should consider using them for selected cases.

Dr. Hardin, Scott and White Clinic, Temple, Texas 76501.

Colonoscopy: Diagnostic and therapeutic uses

Michael F. Appel, MD

During the past several years, the use of the flexible fiberoptic colonoscope for both diagnostic and therapeutic purposes has gained acceptance. Numerous articles attest the efficacy and general safety of colonoscopy, they include the excellent monograph of Wolff and Shinya,[1] and the recent publication of Cevac and associates.[2] The use of the colonoscope is not entirely simple, and there are numerous comments in the literature about the technique of insertion. The work of Sakai[3] is most helpful regarding the technical fundamentals of colonoscope insertion.

Colonoscopy complications are mentioned by many authors, and consist chiefly of perforation and hemorrhage. The incidence of such complications (2-5%)[4] appears to decrease with the increasing experience of the operator. The excellent results reported by Wolff and Shinya[5] demonstrate quite clearly that colonoscopic procedures can be conducted with a high level of safety.

This article reviews the current clinical applications of colonoscopy (Fig 1) and illustrates these uses in 121 cases.

Methods and Materials

The material included in this report represents our first 121 colonoscopy cases. All procedures were done using either Olympus or ACMI instruments, and all polypectomies were performed with ACMI instruments. All cases are included; there were 71 males and 50 females, and the age range was from 1 to 81 years. In 53 patients, one or more polyps were removed, and the other examinations were for diagnostic purposes or did not bear out the radiographic suggestion of a possible polyp.

In this series, colonoscopy was not generally used to confirm the presence of a radiographically demonstrated carcinoma, but on one occasion it was used to demonstrate the presence of a second carcinoma (in the sigmoid colon) in a patient known to have a rectal carcinoma and normal barium contrast enema findings. Some authors do recommend routine colonoscopy in such patients to detect synchronous tumors or polyps, or both.

The removal of foreign bodies from the colon is not a common indication for colonscopy, but it was used in one case to remove a long intestinal tube which had become immobile in the descending colon after being cut off at the nose. In this situation, the polyp snare was employed to grasp the end of the small intestinal tube, and then this latter was withdrawn to the anus where firm traction could be applied. The tube was removed uneventfully with this technique within 24 hours.

Follow-up examination of patients with stable inflammatory disease of the colon has become a frequent indication for colonoscopy, and can be performed safely in patients with clinically stable disease. This condition was present in five of our cases and all of these patients tolerated colonic

1. Indications for colonoscopy.

Rule out synchronous tumor or polyp in patient with known lesion
Removal of certain foreign bodies
Follow-up for inflammatory colonic diseases
Clarify equivocal barium enema studies
Further investigation of patient with normal x-rays and persisting colonic symptoms
Follow-up after cancer resection or polypectomy
Reduction of sigmoid volvulus
Technical impracticality of sigmoidoscopy
Diagnosis of colonic bleeding site
Colonic polypectomy

preparation without difficulties. Acute colitis is a distinct contraindication to colonoscopy because of the dangers of bowel perforation and intolerance to the necessary preparation.

Clarifying equivocal results of barium enema examination is another well recognized indication for colonoscopy. Every radiologist and clinician has had patients for whom the results of two or perhaps three barium x-ray studies are equivocal. Colonoscopy can be invaluable in these situations. However, colonoscopy has certain limitations in this application, the most striking of which would be the inability to inspect the colon above a stricture. If a narrowed area can be entered and both sides examined and biopsied, then the colonoscopist's impression and biopsies should be valid. If, however, the instrument cannot be inserted above the stricture, then the diagnostic reliability of this technique will be decreased. This indication was present in six patients in our series. In five of these patients, the diagnosis was clarified accurately. In the sixth case, the narrowed area of the colon could not be entered, and no obvious abnormality was found. Because of the clinical suspicion in this case however, laparotomy was undertaken and a carcinoma of the colon was found. When examining a patient to resolve equivocal barium enema findings, it is important to be absolutely positive that the area in question has, in fact, been visualized. For this reason we employ fluoroscopy in many of these examinations.

Another indication for the use of the colonoscope is the further investigation in cases where the patient has persisting colonic symptoms and a negative barium enema report. When doing colonoscopy for a demonstrated lesion, it is not uncommon for us to identify other lesions which were not suspected with the original set of x-rays. Some of these second lesions are quite small, but on occasion fairly large polyps have been identified through the endoscope. The same is true of small carcinomas, and it is clear that colonoscopy will identify lesions not seen on barium enema examinations.

Another common indication for colonoscopy is for follow-up examination of patients who have had colonic polyps or carcinomas removed. In our series, four patients who had previous endoscopic polypectomy demonstrated another polyp at the time of the six-month follow-up examination. It can be anticipated that the longer the follow-up period, the greater the incidence of these metachronous polyps will be. The same, of course, applies to follow-up of patients with colonic carcinoma due to the well known phenomenon of metachronous neoplasia. Colonoscopy is, in addition, a useful tool for the examination of colonic anastomoses for cancer, particularly since the anastomotic area is so commonly the location of tumor recurrence.

A less common indication for colonoscopy is for the reduction of sigmoid volvulus, but we have not had occasion to use the colonoscope for that purpose.

Another less frequent indication will be the examination of the patient who requires sigmoidoscopy, but for various technical reasons cannot be properly examined with the rigid sigmoidoscope. An example of this would be a patient in a body cast, or a patient who for other reasons could not be adequately positioned for the rigid sigmoidoscope.

Another indication for colonoscopy is in the diagnosis of massive intestinal bleeding. Technical difficulties involved in this can at times prevent a safe, adequate examination because excessive blood is present, and in these circumstances the examination must be terminated immediately with no conclusion obtainable. In situations where the colon can be adequately prepared, however, the colonoscope could be useful. In our series, there was one case in which such acute bleeding required colonoscopy, but no diagnosis was possible

because of the large amount of blood present.

The indication for colonoscopy which is receiving significant attention at present is polypectomy. Any number of polyps, of any size, can be removed from any location in the colon. Polyps from the cecum are removed in the same manner as the more frequent sigmoid polyps. The greatest number of polyps that we removed at one session was 11, and the largest size polyp was 4.5 cm. Even larger polyps can be removed.

As a corollary to polypectomy, routine colonoscopy should be performed in members of the immediate family of patients with a high familial incidence of colonic carcinoma or polyps, and in patients who have an immediate relative who developed colonic carcinoma or polyps at an unusually young age. In our series there are two such families, and in these we have examined four asymptomatic relatives of two patients known to have colonic carcinoma. In these four asymptomatic relatives, there were two with small, benign polyps. Follow-up for life is clearly indicated in such families on an every-six-months basis, and it is felt that colonoscopy rather than barium enema is indicated because much smaller lesions can be identified endoscopically.

Colonoscopic Polypectomy

The most frequent therapeutic application of colonoscopy is for polypectomy. A significant number of cases have been accumulated, and some preliminary conclusions can be drawn from them as well as for our own experience. The safety of the procedure is well established. The exemplary series of Wolff and Shinya,[5] in which virtually no complications have occurred, can be compared with the experience of other colonoscopists, who report complication rates in the 2-5% range.[4] Contrast this with a 20-25% complication incidence as reported by Kleinfeld and Gump[6] for transabdominal polypectomy, and it is abundantly clear that endoscopic polypectomy does indeed represent a great advance in safety when removing colonic polyps. Bleeding following polypectomy has been treated with observation or transfusion, or both, in most cases, but has also required laparotomy on occasion. Perforations of the colon generally have required laparotomy, but sometimes bowel rest achieves resolution of the perforation. These two most common complications of colonoscopy occur both in diagnostic as well as polypectomy procedures, so one must observe all the safety precautions whenever employing this instrument for whatever purpose.

In our series of 99 polypectomies, there was one patient with bleeding of approximately 350 cc. No transfusion or operation was required, as this bleeding spontaneously ceased. There were no incidences of perforation, and the complication rate was approximately 1%.

2. Size range of polyps removed.

Size	Number
0.5-1 cm	54
1-2 cm	35
2-3 cm	8
3-4 cm	1
4-5 cm	1

3. Location of polyps removed.

Location	Number
Sigmoid	65
Descending	17
Transverse	13
Ascending and cecum	4

4. Diagnoses of polyps removed.

Diagnosis	Number
Adenomatous	38
Villoglandular	25
Hyperplastic	25
Villous adenoma	2
Juvenile	8
Carcinoma	1

Of the 53 patients from whom these 99 polyps were removed, the male to female ratio was approximately 3.5:1 (41 male and 12 female).

The size range of these polyps is illustrated in Fig 2, and varies upward from 0.5 cm. No polyps measuring under 0.5 cm. are included in this series.

The location of these polyps is seen in Fig 3, and follows the well known distribution of neoplastic diseases of the colon.

The pathologic diagnoses are shown in Fig 4, and again confirm the well known clinical incidence of various types of colonic polypoid lesions.

It is important to note that the one carcinoma which was removed as a polypoid lesion was entirely excised with the snare polypectomy. The view of experienced endoscopists is that if the carcinoma is limited to the head portion of the polyp, and does not invade the stalk, then endoscopic polypectomy represents adequate management. If there is microscopic invasion of the stalk, of course, a colon resection should be performed.[7]

Colonoscopic polypectomy offers an additional advantage over the transabdominal route, and that is in terms of hospital morbidity and hospital cost. The mean length of stay in the hospital following laparotomy polypectomy, as reported by Goldhaber and associates,[8] was 18.8 days, as compared to 4.4 days with endoscopic polypectomy. Many polypectomies can be performed safely on an outpatient basis, with several hours' postprocedure observation and basically no formal stay in the hospital. In terms of cost, Goldhaber's comparative figures were $3,241 for laparotomy polypectomy and $1,075 for endoscopic polypectomy. Outpatient polypectomy, of course, can be performed with a saving of approximately $100 per day in which hospitalization is not required, for a figure more in the $600 range. This compares most favorably with the $3,000-plus cost of a transabdominal polypectomy.

Further, the several weeks to months period of work loss incurred after laparotomy can be entirely obviated by endoscopic polypectomy. Many of our polypectomy patients were back at their jobs the same day of the procedure, and all were back to work the following day.

Summary

Our experience with colonoscopy closely parallels that of other endoscopic surgeons, and illustrates the variety of clinical applications of the flexible fiberoptic colonoscope, demonstrating its safeties, its potential hazards, and its chief areas of usefulness.

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Dr. Appel, Clinical Instructor, Department of Surgery, Baylor College of Medicine, 6624 Fannin, Houston, Texas 77025.

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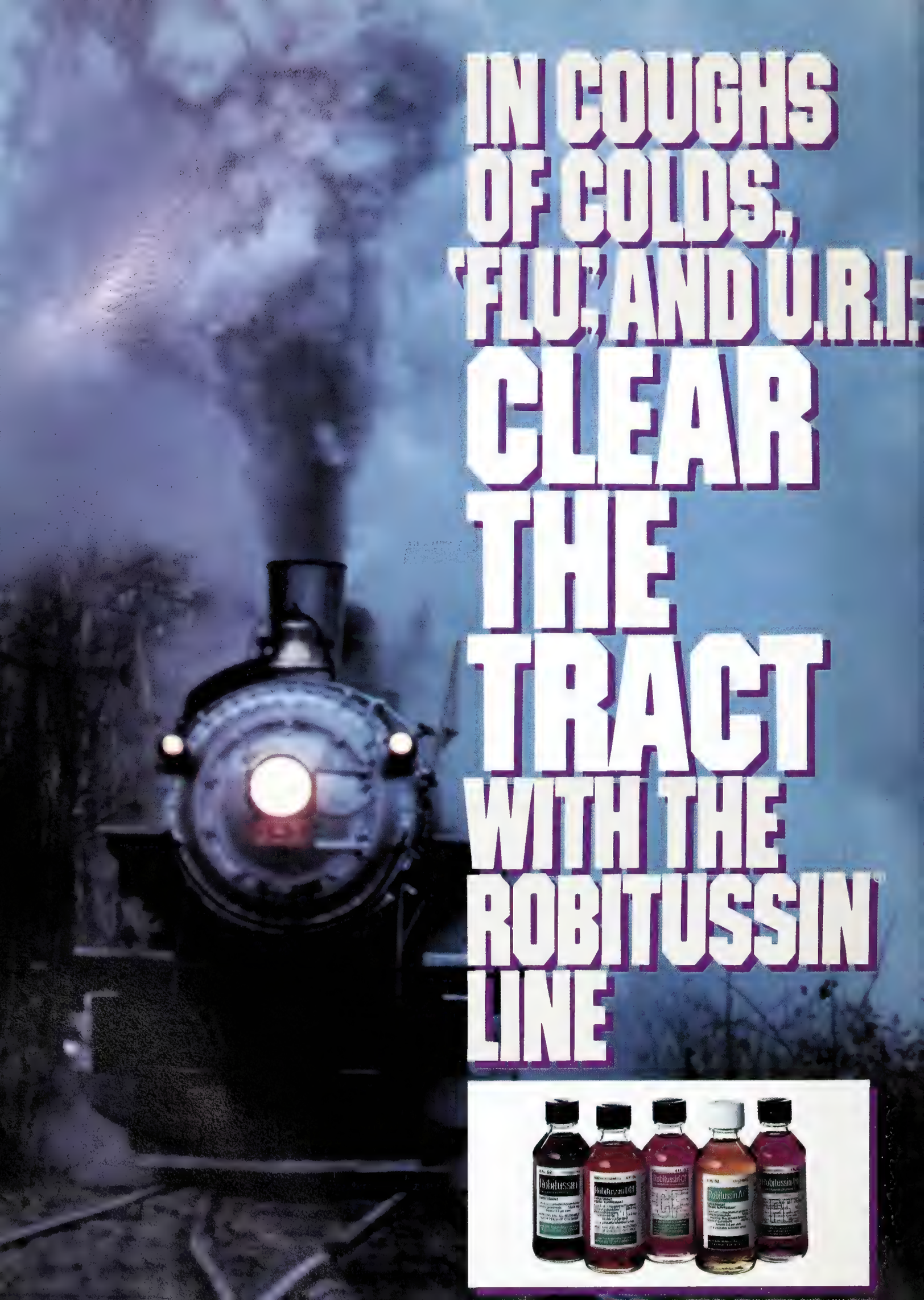
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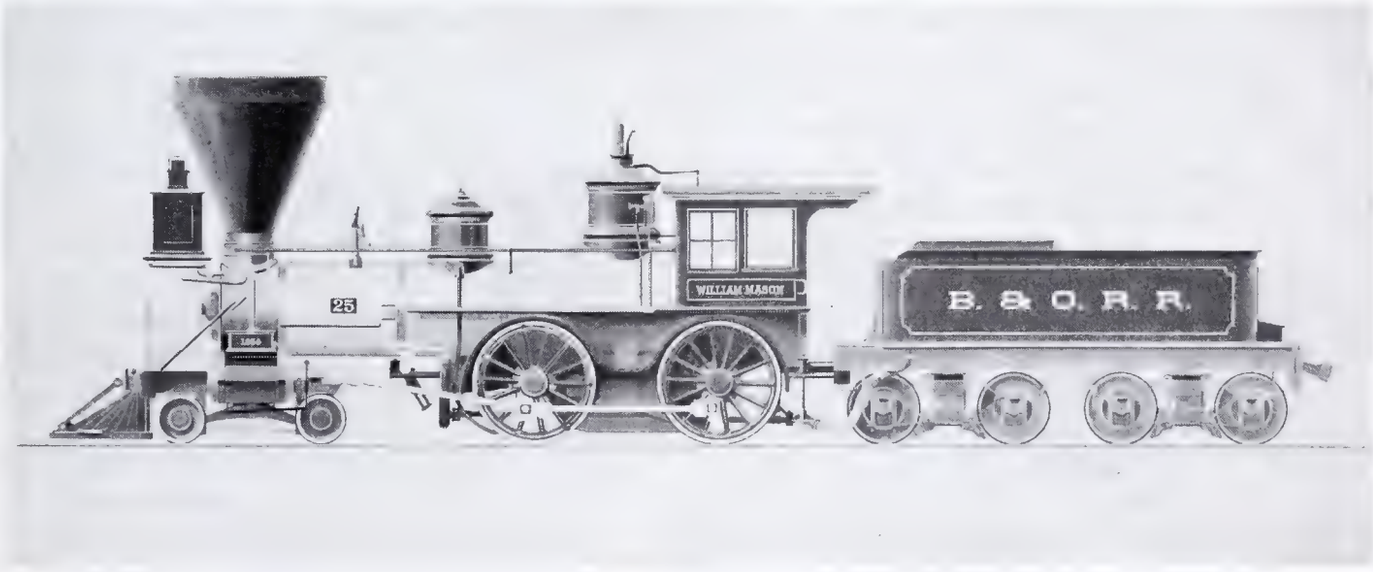

The William Mason (1856)

Colposcopy in the gynecologist's office

James G. Stouffer, MD

The colposcope was developed by Hans Hinselmann in Hamburg in 1926.[1] Combining his knowledge of optics and his curiosity about the origins of cervical cancer, he constructed an instrument utilizing a powerful light source associated with lenses which magnified the image.

Use of the instrument spread gradually throughout Europe, and by 1955 it was in use in many major European clinics. Early proponents added refinements and modifications to Hinselmann's original concepts.[2,3]

Coppelson, Pixley, and Reid[4] have pointed out that concepts have been developed largely on disciplines which concern themselves with events at the microscopic and ultrastructural levels. There has been a hiatus in that zone between what is seen with the naked eye and what is seen with the low power of the microscope. Highly useful as the microscopic approach has been in the study of tissues, its value is enhanced when combined with careful observation at the intermediate magnifications provided by the colposcope. A new world is revealed, any part of which can then be subject to excision biopsy and microscopy.

Colposcopy is a clinical discipline, neither dependent on nor independent of its fellow disciplines of exfoliative cytology and histology, yet capable of permitting sound judgment in some of the most difficult problems of the cervix. Colposcopy furthermore enables the clinician to appreciate and understand the physiology and pathology of the cervix in a fashion not approached by any other method.

Why has such a valuable technique entered the English-speaking world so slowly and with misgivings? Undoubtedly the advent of the Papanicolaou smear was a major factor. As a result, perhaps of national and provincial attitudes, an almost universal misconception arose that the techniques of colposcopy and exfoliative cytology were in opposition. Until recently, their possible complementary value received scanty consideration. To the gynecologist the ease of taking a smear and obtaining a report is appealing. On the other hand, some knowledge of gynecological pathology is an obligatory complement to the understanding of the colposcopic image. Language difficulties, the necessity of learning new and unfamiliar terms, the lack of teachers, the difficulty of self-tuition, the paucity of sufficient publications in English on the subject, and the frank disapproval of colposcopy by some eminent gynecologists and pathologists in the United States and United Kingdom have been other factors.

Critics say that the method is too impractical, too complex, and too expensive. With skill and practice, the procedure is little more time consuming than the introduction of a speculum and the taking of a smear. Scott[5] has stated that a negative screening colposcopic examination takes less than two minutes. Complexity is an insufficient argument on which to condemn a method merely on the grounds of a short apprenticeship. As to expense, the cost of the instrument may be recovered by the performance of colposcopic screening examinations at the time of obtaining the Papanicolaou smear.

That optimal results will be obtained by the simultaneous use of colposcopy and cytology has been shown by the classical reports from the clinics of Navratil and Limburg and many others. Studies have shown the accuracy of colposcopy alone to be about 85-90%, and the accuracy of cytology to be about 85-90%. Utilizing both techniques together, the accuracy ap-

proaches 100%. Coppelson, in utilizing the colposcope in taking cytological smears in 321 cases of preclinical carcinoma of the cervix, found positive results in 92% with colposcopy, 93% with cytology, and 98% with combined techniques. Without colposcopy it is impossible to be certain of the actual false negative cytology rate, for if a patient has no suggestive symptoms and signs and the smear is negative, the cervix usually is not subject to any further examination.

Colposcopy, because it enables the physician to define precisely the size, site, and quality of most atypical cervical lesions, also enables identification of the source of cellular abnormality and allows a safe selection of the location from which a biopsy is to be made.

Materials and Methods

We have been doing colposcopic screening in our private gynecological practice since February 1973. A colposcope utilizing 13.5 X magnification is used.

This report illustrates the experience and the results of routine colposcopic screening for a one-year period in the office of a practicing gynecologist. From May 1, 1973 to May 1, 1974, we have examined 1,302 patients by colposcopy. Most of these patients were examined at the same time a Papanicolaou smear was obtained. A few were referred by other physicians because of abnormal cytological findings.

The procedure has been offered as an option to the patients. We explain that in order to provide total gynecologic care we are advising a colposcopic screening examination at the time of the Papanicolaou smear or, if indicated, at the time of other pelvic examinations. A small folder explaining the procedure is given to each patient.

After having read the folder and having had the procedure explained, the most frequently asked question is, "Does it hurt?" The patient is reassured, and the majority of patients then request the examination. Most have expressed great pleasure to learn there is an improved diagnostic method available to them.

Results

Colposcope-directed biopsies using the Eppendorfer biopsy forceps were performed on 96 patients who represented abnormal colposcopic patterns. The procedure is almost totally painless and no analgesia is required. Bleeding is generally well controlled by the use of tampons and has not been a problem. The histological results of these biopsies are shown in Fig 1.

Correlation of the directed biopsies with cytology is illustrated in Fig 2. Noteworthy are the two patients who, in the presence of class II Papanicolaou smears, exhibited abnormal colposcopic patterns which indicated biopsy. The biopsies yielded carcinoma in situ in both patients, and definitive therapy was accomplished.

The one patient with adenocarcinoma of the cervical canal had a class IV Papanicolaou smear, however, the lesion was readily visualized with the colposcope and biopsy was performed concurrently with the taking of the smear. In retrospect, the smear was only of academic interest.

The patients showing severe dysplasia showed primarily class II smears.

It is not within the scope of this study to discuss or evaluate the therapy; however, in all cases wherein definitive therapy was performed (conization or hysterectomy),

the histologic diagnosis of the surgical specimen was in general agreement with the directed biopsy diagnosis. Certainly in a larger series one would expect some variation.

Discussion

In the absence of colposcopy, biopsy procedures tend to fall into two rigidly prescribed routines: one group favors the exclusive use of cold knife conization, even in pregnancy, for the investigation of both doubtful and positive smears; the other favors the use of multiple punch biopsy, usually the four quadrant type. Fear that the random entry of the scalpel or punch biopsy may have missed the true area of involvement is only partially alleviated by the use of Schiller's test.

Neither of these routines can replace the adaptation of the biopsy directed to the size and shape of the lesion as revealed by direct observation with the colposcope. With this flexibility comes the assurance of dealing directly with the critical site. Colposcopy accurately defines the histopathology of the cervical lesion in all cases in which the lesion does not extend into the endocervical canal and the entire squamocolumnar junction can be fully visualized. Stafl and Mattingly[6] found that the squamocolumnar junction was not entirely visible in only 12.8% of their cases.

Biopsy directed by the colposcope prevents the cervical bleeding which frequently results from the large multiple punch biopsies or cervical conization. Avoiding conization in pregnant patients means avoiding an increased risk of abortion and premature delivery as well as the cervical incompetence that can result from the operative procedure.

Stafl and Mattingly have reported that the need for diagnostic conization and its attendant complications and cost were eliminated in more than 85% of 1,410 patients referred for colposcopic evaluation. Most of these patients were referred because of abnormal cytologic findings. Diagnostic conization was performed in only 80 (5.6%) patients wherein colposcopy was unsatisfactory.

Scott[7] has found that most dysplasia has been cytologically negative and colposcopically positive. If dysplasia is indeed premalignant, much cancer of the cervix could be prevented by the removal of these lesions by selective colposcope-directed biopsy. In his series of 19 cases of carcinoma in situ, cytology missed three cases and colposcopy missed two. In eight cases of invasive cancer involving the cervix, cytology missed two and colposcopy missed one. There were no known lesions missed by both methods.

There are two schools of thought about the proper utilization of colposcopy. First are those who advocate routine screening of all patients at the time of the Papanicolaou smear. Second are those who adhere to the concept that colposcopy should be reserved only for those patients with abnormal results of cytologic studies.

1. Colposcope-directed biopsy of cervix, May 1, 1973-May 1, 1974.

Pathological Diagnoses	
Squamous metaplasia	9
Dysplasia	
Mild	44
Moderate	15
Severe	15
Carcinoma in situ	9
Invasive carcinoma	1
Adenocarcinoma	1
Condyloma	1
Papilloma	1
Total	96

In large clinics where the personnel and facilities are overtaxed, routine colposcopic screening is not currently practical. There are too few trained colposcopists and too little time.

In the private gynecologist's office, however, routine colposcopic screening can be performed with the addition of a minimal amount of the physician's time. The private patient is an individual who is seeking examination for the detection of abnormalities and willingly pays for this service. She is not a number, and is not a statistic. She is either 100% well, or she is 100% not well. It makes no difference to her whether she stands a 1%, 10%, or a 50% chance of illness—she wants to know whether she is or is not healthy! If colposcopy provides the key to diagnosing malignancy in only one patient out of several hundreds or thousands, it is mighty important to the one patient involved. This is a question all physicians need to assess for many different and multiple diagnostic procedures. Are they worth the time, effort, and expense?

While the emphasis up to this point has been on the detection of cervical neoplasia, it should be pointed out that colposcopy is worthwhile in the evaluation of other cervical disorders as well as vaginal and vulvar abnormalities.

Cervical polyps are more easily visualized, and with the colposcope one can readily determine their character. Removal in the office is greatly enhanced by colposcopic visualization. Many cervical polyps have been discovered with the colposcope that were not visible to the naked eye. While they probably are not very important when they are so small, it is reassuring to the clinician to discover them and to be able to follow their course at subsequent examinations.

Recently, vaginal adenosis in young girls whose mothers were given diethylstilbestrol (DES) during pregnancy has received considerable attention.[8] Colposcopy has been shown to be an accurate method for the diagnosis and evaluation of vaginal adenosis and clear-cell adenocarcinoma.

Condylomata acuminata seem to be progressively more resistant to therapy. One may believe they have been completely eradicated when examined with the naked eye, only to discover small lesions remaining when the colposcope is used to examine the vulva. Colposcopy has been most helpful in evaluating and treating these lesions.

Herpes progenitalis lesions are visualized more easily by colposcopy. One may be sure the medication of choice is being properly applied with the added magnification of the involved areas.

Chronic vulvitis can be evaluated more completely by colposcopy. Vulvar

2. Correlation of cervical biopsies with results of Papanicolaou smears.

	Papanicolaou Class				
Colposcope-Directed Biopsy Results	Class I	Class II	Class III	Class IV	Class V
Squamous Metaplasia	7	2			
Mild Dysplasia	17	26	1		
Moderate Dysplasia	4	8	3		
Severe Dysplasia		1	13	1	
Carcinoma In Situ		2	6		1
Invasive Carcinoma				1	
Adeno-carcinoma				1	
Condyloma			1		
Papilloma		1			

lesions can be visualized and directed biopsy may be done with increased accuracy. It is reassuring to the clinician when the vulva of a patient with chronic vulvitis has been scanned with the colposcope and no indications of carcinoma are found. We have always worried that we might some day overlook a vulvar carcinoma in these cases.

Finally, it appears that routine colposcopic screening used in conjunction with exfoliative cytology by the private practicing gynecologist is a worthy procedure. It is true that the examination takes a few more moments of his time; however, most of us lose our office time in talking with patients—not in examining them. It takes time and effort to learn and to master the colposcopy technique. The instruments are expensive. On the other hand, colposcopy not only provides a better understanding of the physiology and pathology of the cervix, but is rewarding in that one is assured of providing better and more complete gynecological care. What could be more satisfying than to discover carcinoma in situ that would have been overlooked without colposcopy?

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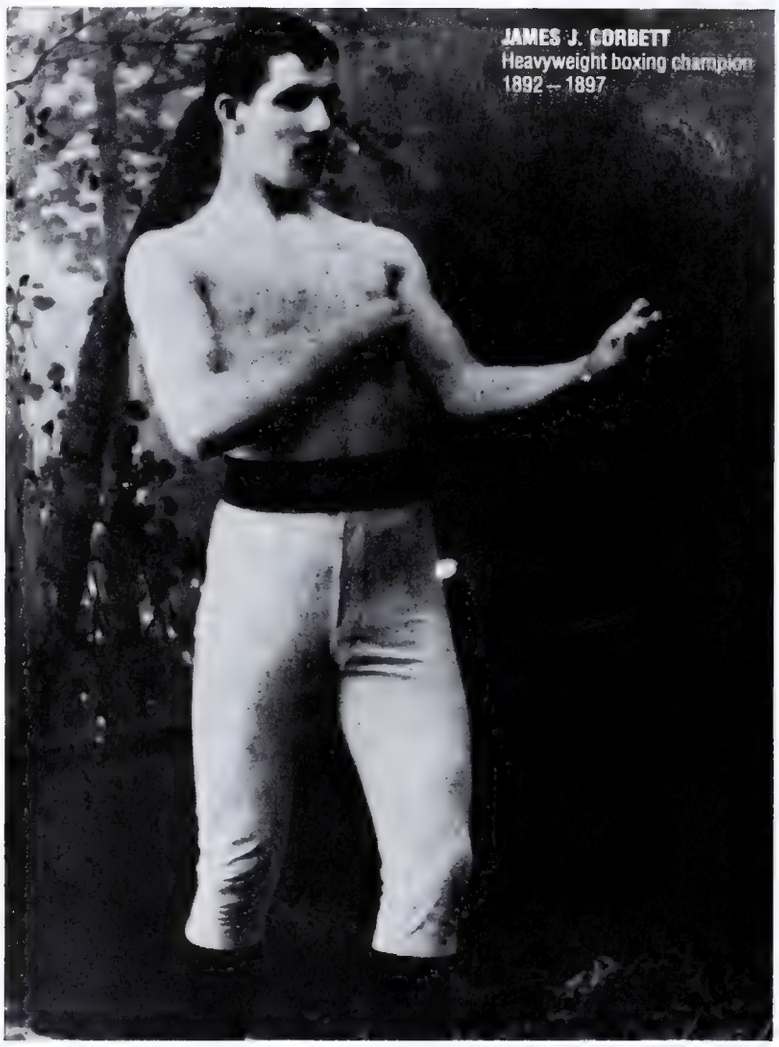

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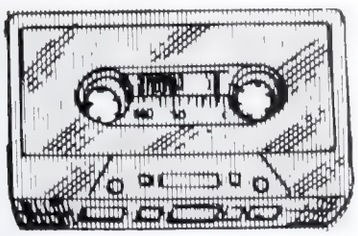

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Geometric total knee arthroplasty: Local complications

Kermit W. Fox, MD

Local complications were noted in 31 of 74 knees in which Geometric total knee arthroplasty was performed. Nine of the knees had major complications, while 22 had minor ones. The incidence of major complications declined sharply from 21.5% in the first half of the series to only 2.5% in the second half. This significant decrease suggests improvement related to experience with the rather technically difficult operation.

Total knee replacement initially was confined to the constrained or hinged type of prosthesis, such as the Walldius, Shiers, and Guepar. More recently, however, many unconstrained models have been and are continuing to be developed. Of the latter, the Geometric total knee is one of the most popular. Local complications that occurred in a series of knees in which this implant was used are reported.

Clinical Material

Seventy-four total knee arthroplasties of the Geometric type were done by the members of our clinic between April 1972 and January 1975. Twelve patients had bilateral procedures. There were 48 females and 14 males; ages ranged from 19 to 86 years. Age distribution is shown in Fig 1.

Fifty-six arthroplasties were performed on degenerative knees, 15 on rheumatoid knees, two on knees damaged by trauma, and one on a hemophiliac joint. The transverse transpatellar surgical approach was used in 10 knees (during the first 2½ to 3 months of our experience) and, with one exception, the long median parapatellar approach was used in the remaining 63. The one exception was in a patient in which a lateral hemiarthroplasty had been planned preoperatively.

1. Ages of patients are shown by decade when knee arthroplasty was done.

Decade	No. Cases
2	1
3	0
4	3
5	9
6	24
7	16
8	9

Age range: 19-86 years

2. Incidence of local complications encountered in 74 total knee arthroplasties.

Total:	31 Knees, 42%
Major:	9 Knees, 12%
Minor:	22 Knees, 30%

Method

The method of study used was to review all available preoperative and postoperative x-rays, the operative records, the hospital charts, and the office clinical records. A recent follow-up evaluation was attempted in each case. The follow-up periods in 59 cases were as follows: 2½-3 years, 4 cases; 2-2½ years, 4 cases; 1½-2 years, 7 cases; 1-1½ years, 8 cases; 6 months-1 year, 15 cases; under 6 months, 21 cases. Obviously, the follow-up period is too short in many cases to study long-term problems. Therefore, this report is restricted to the early or relatively early complications.

Complications

Only the local knee problems are discussed; the general, remote, or systemic ones are omitted. These local complications varied regarding seriousness, time of onset, ease of diagnosis, and management. In 31 knees (42% of this series), 42

local complications were noted. Twenty-three knees had a single complication each, whereas 8 knees had multiple problems. Of the 31 joints involved, 9 had major and 22 had minor complications (Fig 2). The major problems were of a degree having already necessitated additional surgical correction or likely to require it in the future. Local complications, together with the number of knees involved, were deep infection, 1; loose prosthetic component, immediate, 2, later, 3; separation of patellar fragments, 4; detachment of patella tendon, 3; fracture of tibial spine, 2; subluxating patella, 2; loose tibial prosthetic component marker, 2; loose pieces of cement, 12; transfixed drainage tube, 1; limited motion, 9; improper size of prosthesis, 1; and malposition of prosthetic components, unknown.

Deep Infection

An 86-year-old female had a bilateral total knee arthroplasty performed. A deep *Escherichia coli* infection developed in one of her knees three months after the operation. Antibiotic treatment and simple drainage failed and osteomyelitis of the proximal tibia followed. Subluxation of the knee developed. This finally necessitated the removal of the implant and cement, together with debridement. The knee was salvaged through a fusion accomplished by the compression technique 26 months after the arthroplasty. Shortening of the limb was approximately 6 cm.

A second case of questionable deep infection is under observation. This is in a 71-year-old rheumatoid male whose knee never did function ideally following total knee arthroplasty. Eleven months after surgery, the x-rays showed small pieces of cement in the popliteal space, and enterococci were cultured from the knee aspirate. The joint improved somewhat with intravenous and oral antibiotic therapy, and 1½ years after surgery it is in fairly good condition.

Loose Prosthesis

In three cases the tibial component was found to be loose at some time following total knee arthroplasty. Symptoms were present and reoperation and recementing of the involved prosthesis was necessary.

In a 71-year-old female with rheumatoid disease, the tibial component had to be recemented at the time of the original arthroplasty because it was somewhat loose when tested. This woman's knee was asymptomatic for one year and then started to hurt on the medial side. Twenty-seven months postoperatively, a culture grew no organisms and the erythrocyte sedimentation rate was normal. An arthrogram showed a loose tibial prosthetic component with bone erosion primarily around the medial fin. The loose prosthesis together with the cement was removed, the tibial plateau debrided, and a new prosthesis reinserted. Subsequent to this, the patient's pain was gone. The only possible cause we could find for this failure was that both the femoral and tibial prostheses were positioned somewhat further posteriorly than is ideal.

A second case was in a 66-year-old female with a degenerated knee. She was never free of pain after her arthroplasty. Six months postoperatively she was seen elsewhere, an arthrogram was done, and the knee was operated upon again. The tibial component was found to be loose and the femoral component was perhaps wider than is ideal. Both components were replaced with smaller units. To my knowl-

edge, no infection was found. It was of interest that the tibial component, when removed, was twisted upon itself. This could be seen in the preoperative x-rays in which the anteroposterior wire markers were divergent rather than parallel on the lateral projection. One might wonder whether this deformed position was a cause or contributing factor to the looseness of the component. Just before revision, this patient had pain and tenderness over the medial femoral condyle and the lateral tibial condyle. The former might have been caused by the medial angle of the femoral prosthesis being too prominent due to excess width.

In a third case, the loose tibial prosthesis was not suspected, but was found to be slightly loose at the time of a revision for which a subluxating patella was the indication. This prosthetic component was replaced. The underlying process was degenerative joint disease in this case.

In two additional cases it was necessary to recement the tibial component at the time of the initial surgery because looseness was noted when the prosthesis was tested. During a one-year and two-year follow-up, respectively, no difficulty has been noticed in these cases.

There are certain characteristics of the cement-bone interface, such as progressive widening and scalloping, that may indicate loosening of the prosthetic component. Unlike in total hip replacement, serial x-rays showing comparable identical projections of the knee are virtually impossible unless fluoroscopy is used each time for critical positioning. Anteroposterior projections of the tibial component with the prosthetic fins in true profile are particularly helpful for studying the interface line, but unfortunately only a few degrees of rotation obliterates this true view.

Patella Separation

During the first few months during which we did Geometric knee arthroplasties, ten knees were approached through an oblique patella osteotomy as described by Walldius. Of these, four had separation of the patella fragments.

The first patient showed a 5 mm elongation of the patella osteotomized fragments. He attained a good final result, but lacked full extension for four months.

The second patient pulled her patella fragments apart between the fourth and sixth weeks postoperatively. Because of her acceptable progress, this was not repaired, and when seen 33 months later she lacked only 10 degrees of full extension. Considerable painless grating, however, was noticed.

The third patient sustained a fracture through the lower pole of the patella three weeks postoperatively with 1 cm separation. This was not treated. He attained full extension, but retained painless clunking with motion.

The fourth patient sustained separation of the patella osteotomized fragments at about the time the joint was manipulated two weeks postoperatively. The patella was wired immediately.

These patella complications were all related to the transpatellar approach. Since it is now known that the long medial parapatellar approach is quite adequate, such patellar problems should no longer occur.

Detachment of Patella Tendon

In one case, where the patella tendon had

been detached for medial transfer, the tendon and staple pulled loose postoperatively, necessitating restapling ten days later. Two other cases had inadvertent partial separations of the medial portion of the patella tendon insertions. One was repaired by staple and the other was sutured.

Fracture of Tibial Spine

In one knee each of two cases, the tibial spine fractured while the tibial plateau was being reshaped. In each instance, the fragment was successfully stabilized by a cancellous compression type screw and caused no problem during convalescence. This complication is less likely if the vertical cuts in the tibial plateau next to the tibial spine are made first and then followed by the horizontal ones. Doing this in the reverse manner leads to the error of undercutting the spine (Fig 3).

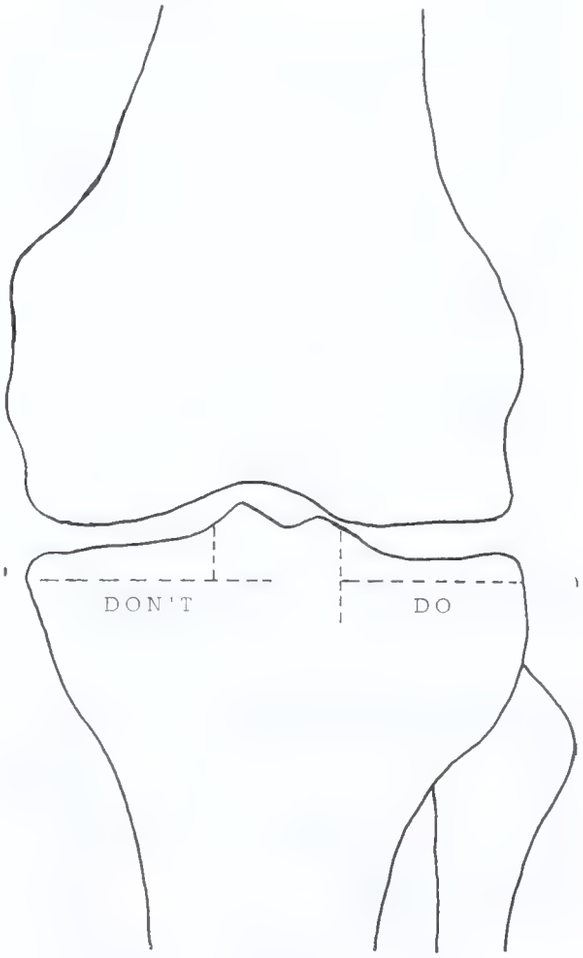
Subluxating Patella

Lateral subluxation of the patella occurred in two knees following total knee replacement. In the first patient, femoropatella symptoms developed one year after arthroplasty. Lateral subluxation of the patella in this case was corrected by a medial transfer of the patella tendon together with release of the lateral retinaculum. At the time of this operation, it was also noticed that the tibial component was slightly loose, and it was therefore recemented. One of the markers in this loose prosthesis had migrated posteriorly. At follow-up one year following this revision, the knee was doing well. A second patient showed lateral subluxation of the patella, first noticed 26 months following total knee arthroplasty. No treatment has yet been carried out for this, but the knee is moderately painful.

Loose Tibial Component Marker

In two knees, a marker wire from the tibial component became loose. In one case, the marker migrated to and lodged in the subcutaneous tissue of the calf. Since the limb has remained asymptomatic, the wire has not been removed. In a second case, already described, the one marker migrated posteriorly and was removed because revision was done for other reasons. This problem of loose markers

3. This illustration shows correct and incorrect methods of reshaping the tibial condyles.



should no longer occur since in the construction of current prostheses the markers are imbedded more securely.

Loose Pieces of Cement in Knee

In addition to the three knees already mentioned as having loose tibial prosthetic components, there were 12 knees in which loose pieces of cement were seen during the postoperative period. These pieces varied from one to three in number and from a few millimeters to 3 cm in size. They were most frequently seen in the popliteal space. Many of these were small slivers, but a few were larger cuboid pieces. It was impossible to say which ones originated as a result of acrylic fractures, but the main source was from the posterior and intercondylar area of the tibial component. These pieces were noted at varying times following the arthroplasty. Six of these knees were asymptomatic, whereas the other six had symptoms and findings such as moderate pain, achiness, clicking, effusion, and in one instance, tenderness over a loose piece on the medial side of the tibial condyle. Some of these symptomatic knees also had other things wrong with them. On the knee x-rays, methyl methacrylate fragments impregnated with barium look homogenously dense, may be angular, and the margins may be crescentic when molded by prosthetic surfaces. On the other hand, calcific arterial plaques and calcified cysts or osteophytes are usually trabeculated or mottled. The consequences of loose cement in the knee are not entirely known, but the size or location of the pieces may be important. Are such pieces capable of causing synovitis or scoring the articular surfaces of the implants? Loose pieces can be somewhat minimized by reducing the amount of cement used posteriorly on the components, wiping away the excess while the cement is still soft, and removing the feathered fringes after they have hardened, particularly those overhanging soft tissue.

Transfixed Drainage Tube

In one case, one of the large Hemovac tubes was inadvertently sutured into the deep fascia layer of the wound, necessitating partial reopening of the wound on the third postoperative day in order to release it.

Limited Range of Motion

Postoperatively, a knee having a Geometric implant of the type we used should move from 0 to 90 degrees. Forty-eight knees in our series move at least that much (Fig 4). Seventeen knees had a flexion contracture even though complete extension was attained in each at the time of surgery. Twenty-six knees were manipulated under general anesthesia approximately 14 days postoperatively. In this series, flexion contractures up to 10 degrees were quite compatible with rather

4. Postoperative range of motion in degrees in 74 total knee replacements is shown.

Degrees	No. Knees
0-90	48
Flexion contracture <10°	8
Flexion contracture >10°	9
Flexion less than 80°	3
Flexion of 90° or more	57

5. The incidence of major local complications in the first and second halves of a series of 74 total knee arthroplasties.

All 74 knees	12.0%
First 37 knees (half)	21.5%
Second 37 knees	2.5%

satisfactory knee function. This was probably true because many of these patients were limited in activity. Flexion of less than 90 degrees caused little dysfunction if only one knee was involved. A flexion contracture greater than 10 degrees probably should be considered as a complication.

Improper Size of Prosthesis

In one patient, in whom a revision was done because of a loose tibial prosthesis, it was noted that the superomedial angle of the femoral prosthesis was possibly too prominent. This prosthesis was inserted before a smaller model was available. This error can be avoided by selecting the proper size prosthesis and also by proper placement, especially as far as the medial-lateral position is concerned.

Malposition of Prosthetic Components

What degree of deviation from the ideal position represents a malfunctioning component is indeed difficult to establish at this time. From our study, it appears that tolerances regarding the anteroposterior slopes of both the femoral and the tibial components are fairly high. In the tibial component we have observed extremes from 20 degrees anterior slope to 10 degrees posterior slope with satisfactory function. Likewise, the femoral component has varied from 10 to 30 degrees posterior slope with good function. In six cases, the tibial component was placed more medial than is ideal, with the medial fin very near the medial tibial condylar cortex. This error occurred mostly in angulated knees with subluxation having either an excess varus or valgus deformity. In no instance was the prosthesis placed too far laterally.

Discussion

When fully analyzed in proper perspective, these complications do not unduly detract from the rather gratifying results accomplished in this series of Geometric total knee arthroplasties. Even though no attempt was made to grade these knees preoperatively and postoperatively, a conservative estimate would classify no less than 85% of them as satisfactory or better. Of the 74 knees on which Geometric total knee arthroplasty was performed, 12% had major local complications. It is enlightening and encouraging, however, that in the first 37 cases (half) the incidence of major local complications was 21.5%, whereas in the second 37 cases, it had declined sharply to only 2.5% (Fig 5). This shows that the incidence of complications continued to decrease significantly with the surgeon's experience with the procedure and with the use of a better surgical approach. As these total knee implants wear still longer, will more prostheses become loose, and will detached acrylic fragments become offensive to the joint or to the implanted components? Continued long-term observation should yield the answer.

Summary

The local complications in 74 knees in which Geometric total knee arthroplasties were performed are presented and analyzed. The possible prevention and treatment of these complications is also discussed.

Dr. Fox, 1011 E. 32nd Street, Austin, Texas 78705.

Use of certified public accountants by physicians

Richard J. Vargo, PhD

Most physicians require assistance in managing their practice and personal affairs. Both CPAs and non-CPAs offer management services, but CPAs are more numerous and more available to physicians, particularly in less populated areas, than non-CPA consultants.

To determine the range of CPA services to physicians and the physician satisfaction with those services, a questionnaire was sent to a random sample of 500 physicians, both MDs and DOs, practicing in Texas. The response rate was 43.2% (216).

Of the physicians responding to the questionnaire 89.35% (193) used a CPA in some aspect of managing their practices or personal affairs. Those physicians not using services of a CPA (23) most often cited that CPA services were unnecessary (13) and that other consultants were more available (6). Only four physicians claimed that others were more knowledgable in medical affairs, and none claimed that CPA fees were prohibitive.

Physicians engaging a CPA were then asked if they were satisfied with the quality of the professional services provided. Of the 193 physicians using CPAs, 48.2% (93) were definitely satisfied, 39.4% (76) were generally satisfied, and 10.9% (21) were sometimes satisfied. Only 1.6% (3) were generally unsatisfied. Not a single physician was definitely unsatisfied with his CPA's services.

Fig 1 shows services presently being offered by CPAs to physicians, and additional services which physicians said they would utilize if their CPAs provided them.

The preparation of income tax returns, income tax planning, and preparation of periodic financial statements clearly con-

This article is based on material previously published in *Computer Medicine* (January 1975) and in *Texas CPA News* (November 1974).

1. CPA services to 193 Texas physicians.

Professional Service	Present Services (a) No. %	Additional Services Physicians Desire (b)	Service Index (%) (a) (a) + (b)
Income tax returns	193 (100)	0	100
Periodic financial statement preparation	130 (67.4)	15	89.7
Income tax planning	129 (66.8)	35	78.7
Accounting systems review	73 (37.8)	33	68.9
Reviews of investment programs	51 (26.4)	60	46.0
Internal control of cash	46 (23.8)	18	71.9
Receivables collection problems	35 (18.1)	36	49.3
Cost control reviews	32 (16.6)	39	45.1
Personnel management	27 (14.0)	22	55.1
Organizational form considerations	26 (13.5)	14	65.0
Review of insurance needs	24 (12.4)	32	42.9
Budgeting	21 (10.9)	32	39.6
Obtaining financing	16 (8.3)	14	53.3
Insurance form processing systems	11 (5.7)	19	36.7
Office location analysis	8 (4.2)	13	38.1
Office layout and decor analysis	5 (2.6)	11	31.3
Patient scheduling systems review	4 (2.1)	16	20.0

stituted the bulk of CPA services to this group of Texas physicians. Only these three services were indicated as being offered to more than 50% of the physicians; income tax preparation was the only service being offered to all physicians.

Fig 1 also shows that physicians desire a number of additional services, and indicates the relative degree to which CPAs are fulfilling physicians' perceived need for professional business services. Both the absolute and relative figures must be reviewed, since they indicate different aspects of the physician-CPA relationship. The seven most requested additional CPA services are reviews of investment programs, cost control reviews, receivables collection problems, income tax planning, accounting systems review, review of insurance needs, and budgeting.

On the other hand, as indicated by the service index, five services being requested by a limited number of the physicians but which are not offered by many CPAs are patient scheduling systems, office layout and decor analysis, insurance form processing systems, office location analysis, and budgeting.

In short, the study reveals that while almost 90% of Texas physicians responding to the questionnaire engage a CPA, and that almost the same percentage are satisfied with CPA services received, there are many managerial services which physicians could obtain in addition to income tax preparation.

Dr. Vargo, Associate Professor of Accounting and Director of Graduate Studies, The University of Texas at Arlington, Arlington, Texas 76019.

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Experiment in pre-paid insurance: it's working for migrant families

Dear Sirs:
. . . it surely was a relief for us nurses to be able to admit this migrant girl without the "hazzle" (sic) we usually go through . . . who is going to pay . . . Do you realize that any migrant person who is admitted to our hospital in Owatonna must sign a wage consignment slip! . . .(the girl's family) have been here for a couple days and have only worked in the field a few hours. Can you imagine the worry these people would have if they had to face this big hospital bill right off? As it is, this family is fearful enough being in a strange part of the country and now to face sickness right away . . . We sincerely hope that your "special study" is successful and that this kind of federally sponsored insurance policy can become a reality for all migrant people. What a blessing this would be for all!

This letter from the Minnesota Migrant Health Service is typical of many received by Jose L. Gonzalez in Laredo. Mr. Gonzalez is director of the Laredo-Webb County Migrant Health Program which is involved in a "special study," an experiment in pre-paid medical insurance among migrant families coordinated by Roland Nanez.

The plight of the migrant population has been repeated many times. They are poor, uneducated, and often non-English speaking. Unemployment is an increasing problem for this segment of the population.

To give *Texas Medicine* a comprehensive look at what the Laredo plan, now in its third year, means to the health care delivery of the migrant population, Mr. Gonzalez reviewed the program's beginning.

"When it was decided to make the study," he said, "I believe there were basically three reasons why Laredo was picked."

First, Laredo had long been involved with the National Migrant Program. Mr. Gonzalez assisted Dr. John Atwater in 1956 in preparing the original "Texas-Michigan Migrant Study," one of the very first studies made by the U S Public Health Service to see what could be done to help the migrants.

"Second," Mr. Gonzalez stated, "after Congress passed the Migrant Health Act in 1962, Laredo was one of the first local migrant health programs to be funded. It then successfully developed an innovative and practical system of preventive and acute medical care for the migrants."

The director cited the quality of the personnel as the third reason. "Outstanding among the many dedicated people that have worked on the program are the names of Fernando D. Laurel, one of the original group, who passed away in August 1975, and Roland Nanez who joined us on this program in 1970, as coordinator."

When Laredo received its migrant health grant, there were no guidelines. Mr. Laurel and the nurse assigned to the program made it a point to visit each and every migrant family in Laredo.

"The point was made in a San Francisco conference back in 1964, that Mr. Laurel of Laredo was a walking coffee urn," Mr. Gonzalez remembered. "Every migrant family he would visit would offer him a cup of coffee, and he once remarked that he had drunk 31 cups of coffee in one day!"

Mr. Gonzalez continued, "The addition of Mr. Nanez in 1970 proved invaluable to the program. By that time, the program had grown and so had the Laredo-Webb County Health Department as a whole. As administrator of the department and director of the program, I could not dedicate as much time to the program as before. Mr. Nanez's resourcefulness and ingenuity,

and complete dedication very definitely gave an additional dimension to an already established and prominent program and helped open the door to an invitation that was soon to come."

HEW proposes study

Early in 1972, the Dallas office of the Department of Health, Education and Welfare, contacted Mr. Gonzalez about wanting to undertake a study of the cost and utilization patterns of migrant workers' health care. The health department agreed to undertake the study, as a major step toward accomplishing one of its overall objectives of developing a mechanism through which comprehensive, quality health care could be made available, not only to the migrant population but also to the entire indigent community.

"After we had accepted," Mr. Gonzalez recalled, "two completely unexpected developments of major proportions occurred. The late Dr. Leonides G. Cigarroa, chief clinician of the local health department who had become very interested in the proposed study, contacted the vice president for Blue Cross-Blue Shield of Texas, Victor Kennedy, and invited him to join the department in the study. The proposal was accepted, and Blue Cross-Blue Shield is now one of the four members of this team."

Blue Cross-Blue Shield's major responsibility in the project is that of the primary data gathering and reimbursing agent for the study. In addition, they are directly responsible for providing much of the technical expertise necessary.

Explaining the second occurrence, Mr. Gonzalez said, "Shortly afterwards, The University of Texas School of Public Health in Houston, which had joined the health department in another project, also thanks to the intervention of Dr. Cigarroa, came in as the third partner. Their main mission was to develop the initial questionnaires, the random sample procedures, the analysis of survey data, and the evaluation of

Plight of the migrant worker

Mario E. Ramirez, MD

I have read that there are approximately one million migrant farm workers in America. Half of these come from Texas and over half of these come from my part of the state.

These people are the poorest amongst the poor. They do not have much of an education. Many of them are Mexican-Americans. They do not speak the English language well and encounter language and cultural barriers wherever they go. They are often forced to live in substandard housing. Recently, their plight has been aggravated because of the fact that mechanization and inclement weather have reduced the number of jobs available. They are having to move about more and more. Oftentimes, they are coming home for their usual winter stay disillusioned and empty handed.

Health care for this segment of the population has always been a problem. The government has tried to help with categorical grants and with migrant health clinics. Unfortunately, a good percentage of this money has to be spent on administrative costs and too little actually goes for health care. It is often difficult to recruit full time health personnel to staff clinics on an itinerant basis. The clinics at best can provide public health measures and only some semblance of fragmented primary care. Oftentimes, these facilities are closed at night and on weekends. The migrant does not know where to go for an emergency appendectomy or the like. Continuity of

Editor's note: *Dr. Ramirez of Rio Grande City has practiced family medicine in the southmost tip of Texas for 25 years. He has served as vice chairman of the American Medical Association's Committee on Health Care of the Poor and is currently chairman of the Texas Medical Association's Committee on Health Care of the Poor. He is also a member of the TMA Council on Tax-Financed Health Care Programs and the Committee on Health Planning.*

both the present and the future of the study."
Actual patient benefits became available on March 15, 1973, for the 100 families who were selected to participate in the study the first year. During that first year, several important accomplishments became obvious according to Mr. Gonzalez. First, it was shown that a combination of private and public medical services could be made available in a viable package. Second, health data concerning this specific population was documented. Thirdly, a working and acceptable mechanism of communication between the agencies involved was created.
The fourth member of the team, Mr. Gonzalez added, is the Dallas Regional Office of the Migrant Health Program, U S Public Health Service.

Benefits

The Comprehensive Health Care Plan is a project which entitles the participant to ambulatory health care and hospitalization benefits. The provisions for patient care can be broken down into two distinct categories: 1) care in the Laredo area and 2) care "upstream" or outside the Laredo area.
The concern of the project since its inception has been to provide a practical program which would meet the unique continuity problems which are created by migration patterns.

Health care: Laredo

Primary medical care as well as a full array of preventive and dental services have been available to the migrant population of Laredo through the Migrant Health Program for many years. This source of medical care continued as a primary delivery system after the study was initiated. All participants can attend the general medical clinics as well as the dental clinic and a number of preventive medical clinics without incurring any financial liability for

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care just can't be provided under these circumstances. Most migrant farm workers do not have much in the way of bank accounts. Neither do they have hospitalization insurance. It isn't difficult for them to afford to pay for routine outpatient office care, but it is catastrophic financially for them to have to go into a hospital for a cesarean section, a ruptured ulcer, or an accident of any type.
Federal grants to migrant clinics do not provide funds for any type of hospital care. We have tried desperately to point out that herein lies the greatest need of all but it has been to no avail.
An insurance policy, such as is available to Medicaid recipients, would solve this problem. It would bring the recipient into the mainstream of care wherever he or she might be. It would avoid duplication of services and be much less expensive in the long run. Our groups asked for funding so that a pilot program utilizing these mechanisms could be conducted, but we did not succeed.
Finally, the Department of Health, Education and Welfare did agree to a pilot project in Laredo. The initial results were very encouraging and the number of families in the study have been increased to 700. The program thus far has proven to be a resounding success with the cost per person this year averaging $9.39 per month.
Both the American Medical Association and the Texas Medical Association have endorsed the concept of a federally subsidized insurance program for the migrant farm worker and have attempted to get Congress to enact such legislation. This same procedure could be applied to other segments of the population such as the American Indian outside the reservation and the Appalachian poor. This approach is uncomplicated and will do more good than the many overlapping categorical grants and projects now in effect.

the visits.
If a participant is in need of a specialist's services not provided in the health department, they are referred to a private physician in which case 100% of the usual, customary, and reasonable charge is incurred by the program through the Blue Cross-Blue Shield mechanism. A participant also has the option of going directly to the private physician of his or her choice, in the Laredo area, without consulting the program. Under these circumstances, 75% of the usual, customary, and reasonable charge is incurred by the program through Blue Cross-Blue Shield. The remaining 25% generated by this type of visit is the responsibility of the participant. Hospitalization in the Laredo area is paid in full with semi-private quarters and 70-day limitations in existence.

Health care: upstream

Throughout the migration patterns of the participants the private health care system is made continuously available to them through the use of the Blue Cross-Blue Shield mechanism.
Mr. Gonzalez said that two things have made this system work well and be accepted. First, Blue Cross-Blue Shield made special identification cards which specifically gave the benefits and billing instructions for the program. Second, each family was given a special package by the Migrant Health Program which explained the services and method of reimbursement.
Available to the migrant during travels outside Laredo are private physician visits as well as hospitalization on a 100% reimbursement basis. Mr. Gonzalez emphasized that this aspect is a critical necessity when there are no migrant or public clinics available, which is generally the case.

Enrollment

The enrollment selection has been done on a random basis from computer random number tables. To qualify, the family must meet migrant status as specified by federal regulation. Any family receiving medical insurance (Medicare, Medicaid, Employee Benefits, and private) does not qualify since the program does not intend to duplicate existing services.
"There are a total of approximately 1,600 migrant families in Laredo," Mr. Gonzalez stated, "300 of which have some type of insurance. Another 300 cannot be located at any one time because they have moved or are migrating. That leaves 1,000 families eligible for the program."
The program currently has 700 of these families or approximately 4,000 individuals enrolled.
At present all patient care is being supported through the HEW grant mechanism. (One of the goals of the study is that it will eventually lead to all migrants participating permanently, paying part of the premium. Many have already expressed their desire for this.) The participants are not held financially liable for any part of their health care with the exception of the 25% portion of a Laredo private physician non-referral visit. "Obviously," Mr. Gonzalez remarked, "there exists a disparity in the health care program available to the en-

rollees. We are trying to find a solution for this problem."

Flexibility is key

"There is no question that this plan has the inherent flexibility to be adapted to virtually any situation or population. However, it is especially meaningful in the migrant's case because of the mobile nature of the population," Mr. Gonzalez said. "I feel the greatest accomplishment has been the development of a mechanism which circumvents the inherent problems of a dual health care system. It has provided three years of ambulatory health care as well as hospitalization for many families which normally have no means of entering the main stream of medical care. This was evidenced by the initial first year high cost of each group due primarily to the backlog of unsought services."

To date, the program has received nothing but praise from the medical profession, according to Mr. Gonzalez. "In the case of the Laredo-Webb County Migrant Health Program, the private physician is expected to continue his role as the primary health care deliverer in the community. The backlog of unmet medical needs of this population are tremendous, and the physician will have to respond to the additional demands," he said.

The director further explained that another one of the major goals of the project is to acquaint the migrant participants with the mainstream of the medical care system in America. This task includes exposing the participant to the most economical method of obtaining health care (for example, preventive care as compared to acute emergency visit).

"On the other hand," Mr. Gonzalez continued, "it is within the responsibility of the physician to understand that the program operates on limited funds. All visits and procedures are paid on a usual, customary, and reasonable basis. Deviations from these charges will, of course, create an unpaid balance for the participant. Where this happens, a great deal of animosity and mistrust toward the system may be created in the minds of the migrant."

What next?

As for the future, the Laredo Migrant Health Program is having to consider expected cuts in migrant funding which would drastically curtail the services being offered presently. On a nationwide scope, legislation and financing are barriers to this type of system being implemented as a type of national health care plan. Mr. Gonzalez feels that while the system is not the complete answer in every given situation, certain aspects should be given serious consideration.

But whatever is to come, the program in Laredo has developed a harmonious and effective relationship between public and private medicine.

"This has been accomplished through a genuine concern for the health care of the migrant population. In order to continue," Mr. Gonzalez concluded, "this relationship must be maintained."

Medical Newsmakers

Dr. McGivney

Dr. Tuttle

DR. JOHN Q. McGIVNEY of Galveston has been elected as an active member of the American Society for Gastrointestinal Endoscopy at the recent meeting of its governing board.

DR. ROBERT L. TUTTLE has been appointed dean of The University of Texas Medical School at Houston. The final selection was made following the recommendation received from a search committee which had reviewed about 40 candidates. Dr. Tuttle has recently been acting dean of the medical school and prior to that was associate dean for academic affairs.

For the second time in 1975, Baylor College of Medicine scientist DR. BERT W. O'MALLEY, has been recognized by his scientific colleagues for outstanding achievements in endocrinology and biochemistry. Dr. O'Malley, chairman of Baylor's department of cell biology, was awarded the Gregory Pincus Memorial Medal by the Worcester Foundation for Experimental Biology. The presentation was made in conjunction with the third New England Endocrinology Conference in Worcester, Mass.

DR. HARVEY RENGER of Hallettsville was recently honored by Texas Lutheran College during the annual homecoming honors banquet. Dr. Renger received the college's Distinguished Service Award in recognition of his service to his community, state, nation, and profession.

A Corsicana physician, DR. R. LOWELL CAMPBELL, has been elected president of the Association of American Physicians and Surgeons. Dr. Campbell has previously served as president-elect and speaker of the AAPS House of Delegates.

DR. EVERETT C. FOX of Dallas has been presented the Dermatology Foundation's 1975 Clark W. Finnerud Award. Dr. Fox was honored as an outstanding clinician who has devoted much time and skill to teaching. The professor of dermatology, emeritus, at The University of Texas Southwestern Medical School, is also one of 16 chosen by the American Academy of Dermatology to be an honorary member.

DR. JESSE E. THOMPSON of Dallas was recently named president-elect of the Society for Vascular Surgery. He will take office in June. Dr. Thompson is attending surgeon, Baylor University Medical Center, Dallas; and clinical professor of surgery, University of Texas Southwestern Medical School at Dallas.

A Texas family physician is the subject of a television documentary scheduled for broadcast in late 1976. DR. EDWIN R. FRANKS of Iraan recently spent nine days with a film crew who documented his practice, his home life, and his life in the community for the syndicated series "The Human Dimension" sponsored by the Baptist Radio-TV Commission of Fort Worth. During the filming, Dr. Franks was honored by a community covered dish supper attended by more than 150 local citizens.

DR. CHESTER R. BURNS recently took office as the new president of the Society for Health and Human Values. This national society is composed of more than 500 persons who are interested in the human values dimensions of medicine. Currently at The University of Texas Medical Branch at Galveston, Dr. Burns is the James Wade Rockwell Associate Professor in Medical History and associate director of the UTMB Institute for the Medical Humanities.

Two professors at The University of Texas Southwestern Medical School at Dallas have been accorded high academic honors. A professorship has been established at Southwestern Medical School in honor of DR. JACK A. PRITCHARD, a widely-known specialist in obstetrics and gynecology and a teacher at the medical school for 20 years. First recipient of the professorship will be DR. PEGGY WHALLEY, also a professor of obstetrics and gynecology at the school.

Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

□ Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
□ Can relieve nausea and vomiting often associated with vertigo.*
□ Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
□ Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
□ Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

VISUAL FOCUS ON ACUTE GOUTY ARTHRITIS

Foot of patient with acute gouty arthritis as seen by conventional x-ray.

Scintiphotogram of same foot reflects inflammatory process.

The scintiphotograph on the right shows increased uptake of radiotechnetium polyphosphate in the metatarsophalangeal joint and the proximal interphalangeal joint of the great toe of a patient with acute gouty arthritis. This increased uptake probably results from increased vascularity in the affected areas.

For a more detailed description of scintiphotography, see "addendum" at right.

THERAPEUTIC FOCUS ON

CAPSULES, 25 mg and 50 mg

INDOCIN®

(INDOMETHACIN | MSD)

helps relieve pain and other symptoms of inflammation in acute gouty arthritis in selected patients

INDOCIN is a potent drug with anti-inflammatory, antipyretic, and analgesic properties. It should not be used in conditions other than those recommended. Although INDOCIN does not alter the progressive course of the underlying disease, in selected patients with acute gouty arthritis it has been found highly effective in relieving pain and in reducing fever, swelling, and tenderness.

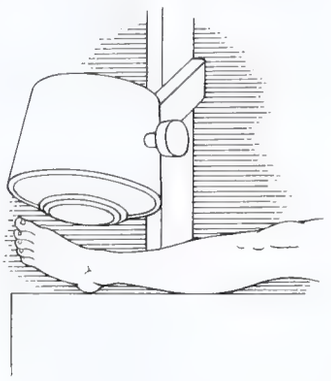
MSD
MERCK SHARP & DOHME

For a brief summary of prescribing information, please see following page.

addendum

MSD
MERCK SHARP & DOHME

Facts about Scintiphotography



In recent years a variety of radiopharmaceuticals have been employed to aid in the diagnosis of bone and joint disorders. The joint-imaging technique consists of injecting technetium polyphosphate intravenously, and imaging is performed with the scintillation camera two hours after the administration of the radionuclide. In general, for joint surveying, the shoulders, elbows, hands, wrists, knees, ankles, feet, and vertebral column are mapped. The entire scanning process takes approximately one hour. The criterion for a positive image is a higher concentration of radioactivity in a joint region than in adjacent nonarticular bone. In effect, each patient serves as his own control.

INDOCIN®
(INDOMETHACIN | MSD)

helps relieve pain
and other symptoms
of inflammation
in acute
gouty arthritis
in selected patients

IMPORTANT NOTE: INDOCIN (Indomethacin, MSD) cannot be considered a simple analgesic and should not be used in conditions other than those recommended. The drug should not be prescribed for children because safe conditions for use have not been established.

Because of the high potency of the drug and the variability of its potential to cause adverse reactions, the following are strongly recommended: 1) the lowest possible effective dose for the individual patient should be prescribed. Increased dosage tends to increase adverse effects, particularly in doses over 150-200 mg per day, without corresponding clinical benefits; 2) careful instructions to, and observations of, the individual patient are essential to the prevention of serious and irreversible, including fatal, adverse reactions, especially in the aging patient.

Contraindications: Children 14 years of age and under; pregnant women and nursing mothers; active gastrointestinal lesions or history of recurrent gastrointestinal lesions; allergy to aspirin or indomethacin.

Warnings: *Gastrointestinal Effects:* Because of the occurrence and, at times, severity of gastrointestinal reactions, be continuously alert for any sign or symptom signaling a possible gastrointestinal reaction. The risks of continuing therapy with INDOCIN in the face of such symptoms must be weighed against the possible benefits to the individual patient. Gastrointestinal effects may be reduced by giving the drug immediately after meals, with food, or with antacids. Use greater care in aging patients.

Ocular Effects: Corneal deposits and retinal disturbances, including those of the macula, have been observed in some patients on prolonged therapy. Discontinue therapy if such changes are observed. Ophthalmologic examination at periodic intervals is desirable in patients on prolonged therapy.

Central Nervous System Effects: INDOCIN may aggravate psychiatric disturbances, epilepsy, and parkinsonism, and should be used with considerable caution in patients with these conditions. If severe CNS adverse reactions develop, discontinue the drug.

Precautions: Blurred vision may be a significant symptom that warrants a thorough ophthalmologic examination. Patients should be cautioned about engaging in activities requiring mental alertness and motor coordination, as driving a car. Headache which persists despite dosage reduction requires complete cessation of the drug. May mask the usual signs and symptoms of infection; therefore, the physician must be continually on the alert for this and should use the drug with extra care in the presence of existing controlled infection. After the acute phase of the disease is under control, an attempt to reduce the daily dose should be made repeatedly until the patient is off entirely.

Adverse Reactions: *Gastrointestinal Reactions:* Single or multiple ulcerations of the esophagus, stomach, duodenum, or small intestine, including perforation and hemorrhage, with fatalities in some instances; rarely, intestinal ulceration has been associated with stenosis and obstruction; gastrointestinal bleeding without obvious ulcer formation; perforation of preexisting sigmoid lesions (diverticulum, carcinoma, etc.); rarely, increased abdominal pain in ulcerative colitis patients or development of ulcerative colitis and regional ileitis; gastritis, which may persist after the cessation of the drug; nausea, vomiting, anorexia, epigastric distress, abdominal pain, and diarrhea.

Eye Reactions: Corneal deposits and retinal disturbances, including those of the macula, have been observed on prolonged therapy; blurring of vision.

Hepatic Reactions: Rarely, toxic hepatitis and jaundice, including some fatal cases.

Hematologic Reactions: Aplastic anemia, hemolytic anemia, bone marrow depression, agranulocytosis, leukopenia, and thrombocytopenic purpura. Since some patients manifest anemia secondary to obvious or occult gastrointestinal bleeding, appropriate blood determinations are recommended.

Hypersensitivity Reactions: Acute respiratory distress, including dyspnea and asthma; angiitis; pruritus; urticaria; angioedema; skin rashes; purpura.

Ear Reactions: Hearing disturbances, deafness, tinnitus.

Central Nervous System Reactions: Psychic disturbances including psychotic episodes, depersonalization, depression, and mental confusion; coma; convulsions; peripheral neuropathy; drowsiness; lightheadedness; dizziness; syncope; headache.

Cardiovascular-Renal Reactions: Edema, elevation of blood pressure, hematuria.

Dermatologic Reactions: Loss of hair, erythema nodosum.

Miscellaneous: Rarely, vaginal bleeding, hyperglycemia, glycosuria, ulcerative stomatitis, and epistaxis.

Note: In patients receiving probenecid, plasma levels of indomethacin are likely to be increased.

Supplied: Capsules containing 25 mg indomethacin each, in single-unit packages of 100 and bottles of 100 and 1000; capsules containing 50 mg indomethacin each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD
MERCK
SHARP &
DOHME

adjunctive therapy for wound debridement

HELPS TO REMOVE:

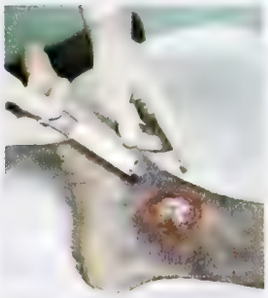
- Necrotic Tissue and Associated Odor

HELPS PREPARE WOUND FOR:

- Granulation/Healing
- Granulation/Grafting

CLEANSE WOUND
Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials.

THOROUGHLY MOISTEN
Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g., sodium chloride or water solutions).

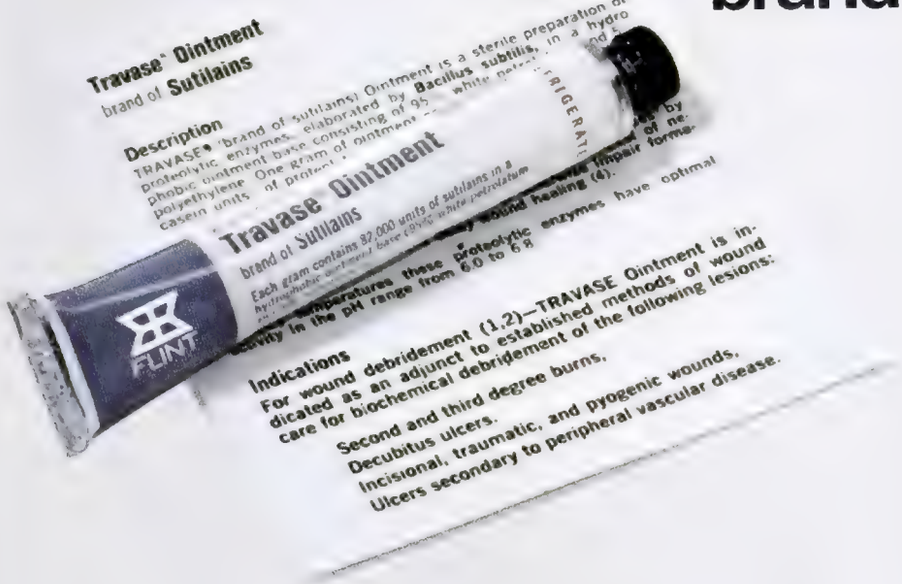


APPLY ENZYME
Apply a layer of TRAVASE Ointment. Assure intimate contact with necrotic tissue and complete wound coverage.

APPLY MOIST DRESSING
Apply loose moist dressings (most important with dry leathery eschar).

CHANGE DRESSINGS
When changing dressing, gently wipe away the dissolved material. Repeat the procedure, including application of TRAVASE Ointment, 3 to 4 times per day for best results.

Travase® Ointment
brand of Sutilains



FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC
Deerfield, Illinois 60015

Please see next page for prescribing information.

Travase Ointment brand of Sutilains

ulcers

TERRY V. CARLE, M.D., CLINICAL INSTRUCTOR, DEPT. OF PHYS. MED. & REHAB.,
CRAIG REHABILITATION HOSPITAL, UNIVERSITY OF COLORADO

Before treatment, necrotic matter coated the inner surfaces of this decubitus ulcer.

After six days of TRAVASE therapy, debridement is nearly complete and granulation evident.

burns

DALE B. DUBIN, M.D., DIPLOMATE,
AMERICAN BOARD OF PLASTIC SURGERY, TAMPA, FLORIDA

Before treatment . . .

48 hours following treatment with TRAVASE Ointment on right hand; left hand is control.

Travase® Ointment

(brand of Sutilains)

Indications: For wound debridement, TRAVASE Ointment is indicated as an adjunct to established methods of wound care for biochemical debridement of the following lesions:

- Second and third degree burns,
- Decubitus ulcers,
- Incisional, traumatic, and pyogenic wounds,
- Ulcers secondary to peripheral vascular disease.

Contraindications: Application of TRAVASE Ointment is contraindicated in the following conditions:

- Wounds communicating with major body cavities,
- Wounds containing exposed major nerves or nervous tissue,
- Fungating neoplastic ulcers,
- Wounds in women of child-bearing potential—because of lack of laboratory evidence of effects of TRAVASE upon the developing fetus.

Warning: Do not permit TRAVASE Ointment to come into contact with the eyes. If contact is made, immediately rinse with copious amounts of water, preferably sterile.

Precautions: A moist environment is essential to optimal activity of the enzyme. Enzyme activity may also be impaired by certain agents (see package insert). Although there have been no reports of systemic allergic reaction in humans, studies have shown that there may be an antibody response in humans to absorbed enzyme material.

Adverse Reactions: Consist of mild, transient pain, paresthesias, bleeding and transient dermatitis. Pain usually can be controlled by administration of mild analgesics. Side effects severe enough to warrant discontinuation of therapy occasionally have occurred.

If bleeding or dermatitis occurs as a result of the application of TRAVASE Ointment, therapy should be discontinued. No systemic toxicity has been observed as a result of the topical application of TRAVASE Ointment.

DOSAGE AND ADMINISTRATION: STRICT ADHERENCE TO THE FOLLOWING IS REQUIRED FOR EFFECTIVE RESULTS OF TREATMENT:

1. Thoroughly cleanse and irrigate wound area with sodium chloride or water solutions. Wound MUST be cleansed of antiseptics or heavy-metal antibacterials which may denature enzyme or alter substrate characteristics (e.g., hexachlorophene, silver nitrate, benzalkonium chloride, nitrofurazone, etc.).
2. Thoroughly moisten wound area either through tubbing, showering, or wet soaks (e.g. sodium chloride or water solutions).
3. Apply TRAVASE Ointment in a thin layer assuring intimate contact with necrotic tissue and complete wound coverage extending ¼ to ½ inch beyond the area to be debrided.
4. Apply loose wet dressings.
5. Repeat entire procedure 3 to 4 times per day for best results.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC
Deerfield, Illinois 60015

MEDICINE AND THE LAW

COURT HOLDS FACT SITUATION IN TEXAS CASE NOT APPLICABLE FOR DOCTRINE OF RES IPSA LOQUITUR

Plaintiff had sued the defendants, doctor and hospital, for injuries sustained when a great amount of blood flowed into his scrotum when a diatube was inserted into his groin during a routine catheterization test. At the end of the plaintiff's testimony, the judge withdrew the case from the jury and rendered judgment that the patient take nothing.

The plaintiff had pled seven specific acts of negligence on the part of the defendants and also pled in the alternative "that he does not know the exact cause of said accident, the blood flowing into the scrotum, but that the character and circumstances of the said accident is such as to lend reasonably to the belief that without negligence, the accident would not have happened. . . ." The plaintiff stated that by reason of the foregoing, he was entitled to rely upon the doctrine of res ipsa loquitur in holding the defendants liable for injuries resulting from the accident. The defendants had specially excepted to the foregoing "for the reason that the same attempts to plead the theory of res ipsa loquitur under which the facts and circumstances of this case is not permitted."

The trial court had sustained such exception and deleted from the plaintiff's pleadings the plea of res ipsa loquitur. The plaintiff brought forth his appeal on one point that the court erred in disallowing the plaintiff's alternative pleading of res ipsa loquitur for either or both of two reasons: (1) the facts and circumstances of this case fall within one of the three types of Texas malpractice cases in which no expert testimony is required and in which res ipsa loquitur is applicable; and (2) there is no basis in medical malpractice cases in Texas to warrant a blanket rule that res ipsa loquitur cannot be applied to malpractice cases. The Court of Civil Appeals affirmed the trial court's judgment for the defendants. The Supreme Court of Texas refused a writ of certiorari on the grounds that there was no reversible error.[1]

Discussion

The court stated that the doctrine of res ipsa loquitur (the thing speaks for itself) is generally held by Texas courts to be inapplicable to medical malpractice cases.

The court stated that an exception to this rule is recognized where the nature of the alleged malpractice and injuries are plainly within the common knowledge of laymen such as leaving instruments or sponges within the body or operating on the wrong portion of the body. In such cases, the court stated that the requirement of medical testimony is eliminated, but the necessity of proof of negligence remains.

The court stated that in this case the plaintiff's injury was not within the common knowledge of laymen but was peculiarly within the knowledge of medical witnesses. The court said the pleadings did not allege facts that would invoke the doctrine of res ipsa loquitur.

Conclusions

Over the years, there has resulted some misunderstanding and perhaps confusion as to the doctrine of res ipsa loquitur and its relation to medical malpractice. The doctrine is a rule of circumstantial evidence that permits the jury to conclude the defendant was guilty of negligence. Essentially, there are three requirements that must be met for the application of this doctrine: (1) the occurrence would ordinarily not happen in the absence of negligence; (2) the instrumentality causing injury was within the sole control of the defendant; and (3) the plaintiff has not contributed to his own injury. Some courts and authorities have asserted that a fourth

element is required—that the evidence to explain the occurrence must be more readily accessible to the defendant than to the plaintiff.

Texas courts have concerned themselves with two essential questions: (1) whether the doctrine is available at all in this type of case, and (2) in what type or class of case the doctrine might be available. Most of the Texas cases have related to the first requirement. The Texas courts do not appear to have reached a consistent view concerning the analysis of the doctrine and its applicability to medical malpractice cases. Although Texas cases have been cited as authority for the proposition that res ipsa loquitur cannot apply in the medical malpractice case, a closer review of those cases perhaps reveals that the doctrine was held inapplicable only to the particular facts in the particular cases.

It would appear that there are essentially two classes of cases in which res ipsa loquitur might apply: (1) cases in which the courts would say that the facts are within the knowledge of a layman; and (2) cases that are so complex as to be exclusively within the realm of expert testimony. There have been no reported cases in Texas concerning the doctrine in which the plaintiff has shown by the use of an expert, in the absence of negligence, that the occurrence would not ordinarily have happened. Most of the Texas cases have been written with respect to the applicability of the res ipsa loquitur doctrine involving situations where there was no expert testimony. The crucial issue is whether the doctrine should be applicable without resort to expert testimony. This obviously is a very limited class of cases.

Essentially, however, res ipsa loquitur might be available in the following types of medical cases without resort to expert testimony: (1) injury to a portion of the body that was not under treatment; (2) foreign object cases; and (3) failure to x-ray.

The genesis of the rule long recognized in Texas comes from the fact that the law favors the physician with the presumption that he has discharged his full duty. To defeat this presumption, the law exacts affirmative proof of breach of duty coupled with affirmative proof that such breach of duty resulted in injury. Negligence is never imputed from results, nor is an inference thereof indulged in against a physician.[2] A physician is presumed to have exercised ordinary care. This is a rebuttable presumption that, according to the case law, requires direct evidence of negligence to rebut. On the other hand, the doctrine of res ipsa loquitur allows a presumption of negligence that is rebuttable by direct evidence of care on the part of the defendant. These presumptions are obviously in direct opposition. The apparent conflict may be resolved by determining in any given case whether the first presumption should be used. In other words, may it safely be presumed that the physician exercised ordinary care? Obviously, under certain circumstances, such a presumption flies in the face of both scientific and legal logic. This has been recognized by some courts and has led in Texas to a more guarded statement regarding the applicability of res ipsa loquitur in medical cases.

The Texas courts have, when compared to other jurisdictions, taken a more restrictive view of this doctrine's applicability—most certainly under the practical necessity to keep from making the risk of treating a patient so great that no one will undertake it. This view will hopefully be continued by our courts.

TMA Office of General Counsel
Ace Pickens

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[1] *Rayner vs John Buist Chester Hospital et al,* 526 SW 2d 637 (Tex Civ App 1975).

[2] *Floyd vs Michie,* 11 SW 2d 657 (Tex Civ App 1928).

Medicine in literature

KEEPING FOOD SAFE, Hassell Bradley and Carole Sundberg, Garden City, Doubleday & Company, Inc, 1975, 266 p, $7.95. This book serves as a guide to handling, preserving, freezing, and storing food at home. The various hazards involved in the improper handling of food are discussed in detail. In addition, the book covers the purchasing and storage of most familiar foods and whom to complain to if something goes wrong. It is a useful tool for any kitchen.

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"Here comes another early bird."

Recent deaths

Dr. Bennett

Dr. Craige

Dr. Jerrell Bennett

Dr. Jerrell Bennett, 74, a Fort Worth obstetrician and gynecologist, died Nov 11, 1975.

Dr. Bennett was a native of Grapevine, Tex, and had lived in Tarrant County most of his life. He was a graduate of Baylor University and Baylor College of Medicine (1927). His internship was at Harris Hospital, Fort Worth. He also did postgraduate work in Cleveland, Ohio.

He began practicing in Fort Worth in 1930. He was on the staff of Harris Hospital, as well as being a consultant for Carswell AFB Hospital.

Dr. Bennett's professional memberships included Tarrant County Medical Society, American Medical Association, Southern Medical Association, American College of Surgeons (fellow), Texas Society of Obstetricians and Gynecologists, and the American Board of Obstetrics and Gynecology. He also was a charter member of the Fort Worth Optimist Club, and had been a Mason for over 50 years.

Surviving are his wife, Pauline Wall Bennett, Fort Worth; two sons, Jerrell Bennett, Jr., of Washington, DC, and Dr. Lee Bennett of Dallas, and three grandchildren.

Dr. Branch Craige, Jr.

Dr. Branch Craige, Jr., retired El Paso internist, died Oct 27, 1975, following a prolonged illness. He was 60 years of age.

Dr. Craige, a native of El Paso, was a graduate of the University of North Carolina (1935) and Harvard University Medical School (1939). He served his internship and residency in New Haven, Conn (1940-43).

He entered the US Army in 1943. During his service Dr. Craige was assigned to the Office of Scientific Research and Development, where he was in charge of an investigation of antimalarial drugs.

As a result of his work, which was a part of a large cooperative investigation involving scientists in various schools and institutions, Chloroquine and Primaquine, two well known and widely used antimalarial drugs were established as safe and effective.

Dr. Craige received the Army Commendation Ribbon and became a member of the National Malarial Society as a result of his work on the project.

Dr. Craige was separated from the service as a major in 1946, and returned to El Paso.

His professional memberships included the American Board of Internal Medicine, American College of Physicians, American Society of Internal Medicine, Texas Society of Internal Medicine, El Paso County Medical Society (past president), and the American Medical Association. He was a former consultant to William Beaumont General Hospital, president of the El Paso City-County Board of Health, and director of the Medical Center Corporation.

Dr. Craige is survived by his wife, Jean McCracken Craige; daughters, Dr. Betty Jean Craige, Athens, Ga, and Mrs. Bruce Johnson, Denver; son, Branch Craige III, New Orleans; and brother, Dr. Ernest Craige, Chapel Hill, NC.

Dr. A H. Neighbors

Dr. Allen Huddleston Neighbors, an Austin physician, died Sept 20, 1975.
Dr. Neighbors, 92, was still practicing at the time of his death. He was a staff member emeritus at Brackenridge and St. David's hospitals in Austin.
A native of Burkville, Ky, he was graduated from Texas A&M University in 1911, and from The University of Texas Medical Branch in 1915. His internship was served at John Sealy Hospital, Galveston.
Prior to moving to Austin in 1941, Dr. Neighbors practiced in Seguin 25 years.
His professional memberships included the American Medical Association, the Travis County Medical Society, and Southern Medical Association.
Dr. Neighbors is survived by his wife, Ola Srygley Neighbors, Austin; a son, Dr. A. H. Neighbors, Jr., also of Austin; a brother, Dr. DeWitt Neighbors, Fort Worth; a sister, Mrs. Nell Beddingfield, Kerrville, Tex; two grandchildren, and one great-grandchild.

Dr. R. L. Noonan

Dr. Richard Leo Noonan, 64, of Grand Prairie, died Sept 10, 1975.
Dr. Noonan, a native of Denver, was a graduate of the University of Colorado (1935) and the University of Colorado School of Medicine (1939). He served both his internship and residency (pathology) at Kansas City General Hospital.
A former member of the US Navy, Dr. Noonan also studied pathology at the Aviation School of Medicine, Pensacola, Fla. He later served as a Naval flight surgeon and official in charge of family clinic (Naval Air Station, Dallas).
Dr. Noonan's professional memberships included Dallas County Medical Society, the American Association of Physicians and Surgeons, and the American Medical Association.
In addition to his professional interests, Dr. Noonan was a member of Sigma Chi and Phi Rho Sigma fraternities, and a member of the Oak Cliff Country Club.
Survivors include his wife, Virginia Carr Noonan of Dallas; daughters, Sheila Noonan of Dallas and Mrs. Tod B. Calhoun of Plano, and two grandsons.

Dr. Neighbors

Dr. Raschbaum

Dr. Leopold Raschbaum

Dr. Leopold Raschbaum, 59, died Oct 8, 1975. He was a resident of El Paso.
Dr. Raschbaum was a native of El Paso, and had been a family practitioner there since 1967. He completed his BS and MD in Mexico City. He served an internship there, and in Los Angeles (1947-48). He also served a surgical residency in Los Angeles.
Dr. Raschbaum's professional memberships included the El Paso County Medical Society, American Medical Association, California Medical Association, and Los Angeles County Medical Association.
Surviving Dr. Raschbaum are his wife, Delia Martinet Raschbaum; sons, Leopold J. Raschbaum, George R. Raschbaum, and Art M. Raschbaum; daughter, Rose D. Raschbaum, all of El Paso; brother, Dr. Alberto Raschbaum, and sister, Alicia Raschbaum, both of Mexico City.

Dr. Ward

Dr. Watkins

Dr. H. L. Ward

Dr. Harold Lloyd Ward, 51, of DeKalb died Sept 24, 1975.

Dr. Ward, a native of Arkansas, was a graduate of the University of Arkansas and the University of Arkansas School of Medicine. He served his internship at Confederate Memorial Medical Center, Shreveport, La (1955-57).

The general practitioner was a veteran of World War II, having served in the US Navy during 1943-45.

Dr. Ward was a member of the Bowie County Medical Society and the American Medical Association.

Surviving are his wife, Jewel Griggs Ward; sons, John G. Ward and Tom J. Ward, all of DeKalb; another son, Joe M. Ward of College Station; and his mother, Mrs. Frank Ward, of DeKalb.

Dr. Margaret Watkins

Dr. Margaret Watkins, a founder and director of the Dallas Cerebral Palsy Treatment Center and the Moody School for Cerebral Palsied Children, Galveston, died Nov 15, 1975. She was 63 years of age.

During her medical career, Dr. Watkins worked on the orthopedic staffs of Baylor, Parkland Memorial and Methodist hospitals.

In 1957, Dr. Watkins was one of the founders of the Watkins Foundation for the Handicapped, an organization dedicated to helping physically and mentally handicapped people.

Dr. Watkins was a native of Dallas, and a graduate of The University of Texas (1934) and Baylor College of Medicine (1938). She served her internship in Albany, NY, and orthopedic residencies at the New Jersey Orthopaedic Hospital in Orange, NJ (1939-40); Parkland Memorial Hospital, Dallas (1940-41); and Baylor University Hospital, Dallas (1941-42).

Her professional memberships included Dallas County Medical Society, American Medical Association, Southern Medical Association, Dallas Southern Clinical Society, Texas Orthopaedic Association (past president), North Texas Orthopaedic Society (Western Orthopaedic Association), American College of Surgeons, and International College of Surgeons. She was an honorary member of Texas Medical Association, and the third woman to be elected a fellow of the American Academy of Orthopaedic Surgeons.

Surviving are a daughter-in-law and four grandchildren.

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Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct nontherapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

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Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. Preston McCall at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

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WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start for salary of $24,000 to $30,000 per year negotiable. City has population of 6,000 with trade area of 20,000 to 25,000. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

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LOCUM TENENS WANTED: Doctor interested in GP work with OB. To cover one doctor on weekly, monthly or any time of the year basis. Financial arrangement negotiable. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

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WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

CHILD PSYCHIATRY RESIDENCY may be taken before or after Adult Psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and out-patient clinical programs. New 60-bed inpatient unit for children. Liaison with graduate school, medical school and community programs. Stipends: First year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

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PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

OBSTETRICIAN-GYNECOLOGIST: When I finished post-graduate training 20 years ago, I wish I could have come across such an opportunity as exists presently for an OB-GYN here in my office. Perhaps this is just what you are looking for. Need one or more men soon. Come out and look us over. No tire-kickers, please. Reply to Ad-598, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

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GENERAL PRACTITIONERS NEEDED immediately in small South Central Texas county. New 42-bed county hospital available. Contact Ad-601, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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WANTED: PATHOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS WANTED: One or two family physicians or surgeons. Three physicians in area. Central West Texas town of 5,000 population; trade area of 10,000 population. Office space available; 30-bed hospital in town. Pleasant climate, good schools. 38 miles east of San Angelo. For more information call: Norvell Meredith, 915-365-3505 or Mrs. Gwen McLarty, 915-365-2531; or write Ballinger Memorial Hospital, Inc., Bronte Highway and Avenue B, Ballinger, Texas 76821.

MEDICAL SPECIALIST MD: Position available now for medical specialist MD on the staff at Terrell State Hospital. Salary $36,000 with possibility of $3,000 additional compensation and $1,000 for board certification. Texas license or eligible for reciprocity. Contact Luis M. Cowley, M.D., Superintendent, Terrell State Hospital, P.O. Box 70, Terrell, Texas 75160. (214) 563-6452. An equal opportunity/affirmative action employer.

PHYSICIANS: Internal medicine, general practitioner, family practitioner, pulmonary, radiologist, for 222-bed medical hospital in Central Texas. Competitive salary, liberal fringe benefits. An equal opportunity employer. Contact Chief of Staff, VA Hospital, Marlin, Texas 76661.

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EMERGENCY ROOM-DALLAS-IMMEDIATE OPPORTUNITY FOR EMERGENCY PHYSICIANS. Paid vacation and scientific conference meetings plus usual corporate benefits. Choice of large or small hospital. Income negotiable depending on experience. Must be Texas licensed and eligible for malpractice insurance. Contact Director of Emergency Room, Methodist Hospitals of Dallas, (214) 946-1818 or write: P.O. Box 5999, Dallas, Texas 75222.

IMMEDIATE NEED FOR GP, FP OR INTERNIST for 4 member clinic—part time surgeon group. Major hospitals. $2,500 monthly/vs percentage. Association possible. 5th member residency bound. Two months vacation/study. Call one weekend monthly, one night weekly. Limit your practice. Fort Worth, 1-817-534-6616.

PART-TIME PHYSICIANS WANTED for Houston area to cover emergency room. Weekends. Malpractice insurance paid. Contact: S. Powers, 2410 S. Voss, G116, Houston 77027. (713) 790-1420.

DALLAS METROPLEX. Full time emergency room physicians needed for new group of career emergency physicians in stimulating new hospital setting. Malpractice paid. Guaranteed minimum possibly $50,000 a year plus percentage of gross. Contact: S. Powers, 2410 S. Voss, G116, Houston, Texas 77027. (713) 790-1420.

EL PASO. Full time emergency room physician needed for new group of career emergency physicians in stimulating hospital setting. Malpractice paid. Guaranteed minimum $45,000-$50,000 a year plus percentage of gross. Contact: S. Powers, M.D., 2410 S. Voss, Suite G116, Houston, Texas 77027. (713) 790-1420.

OPHTHALMOLOGIST WANTED in South Central Texas to take over equipped office of retiring ophthalmologist; buy only the sharp instruments, pay reasonable rent on building and other equipment. Practice grosses $62,000 without surgery. Nice semi-retirement opportunity. Available March first. Please reply to Ad-608, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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WANTED: RADIOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

Situations Wanted

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PATHOLOGIST—BOARD CERTIFIED, both AP and CP. Vast experiences in hospital practice and teaching. Seeking position of director of lab or group practice. Available immediately. Please reply to Ad-609, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED GENERAL SURGEON SEEKS permanent position in medium size or large city in Texas. Willing to do minimal general practice. Please reply to Ad 610, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD ELIGIBLE ANESTHESIOLOGIST 33, FMG, university trained. Active staff at Johns Hopkins Hospital. Well experienced in all fields of anesthesia. Seeking group practice in 200 to 400 bed hospitals. Available July 1976. Please reply to Ad-611, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, married, Diplomate of American Board of Surgery, and Fellow of American College of Surgeons, with twenty years experience in general and traumatic surgery desired relocation in medium sized community, preferably in group or partnership practice. Contact Alfred Edinburgh, M.D., 98-51 Queens Blvd., Rego Park, New York 11374.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

MUST SUBLEASE — Medical or dental office, 1,100 sq. ft., $450 monthly. Carpeting, drapes, utilities and cleaning included. Original lease expires August 1976. Contact Dr. Robert Birchall, 1415 Third Street, Suite 502, Corpus Christi, Texas 78404. 512-882-9278 or 412-882-8226.

OPTICAL COMPANY FOR SALE situated in metropolitan area with gross sales in excess of $225,000, incorporated and enjoys established clientele, glasses and contact lenses dispensed from several offices, personnel including management available to continue operations. Principals only please reply to Ad-597 *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

CLINIC BUILDING FOR SALE IN CLEBURNE, TEXAS. Offices and examining rooms for three physicians. Room for clinical laboratory, x-ray room, dark room. Very large reception room, three business offices, mailing room, and large staff room. Large parking lot adjacent to building is part of property. City and county acutely short of physicians. Large general hospital in city with open staff. Contact E. L. Clark, M.D., Santa Fe Hospital, Temple, Texas 76501.

FAMILY PRACTITIONERS, PEDIATRICIANS, OB-GYN, INTERNISTS . . . If you are seeking your first location or thinking of relocating from your present area, we invite your inquiries about Grand Prairie. For information about office and hospital facilities, call or write Drs. LeBlanc & Sternberg, 2126 Virginia Drive, Grand Prairie, Texas 75050. (214) 264-2466.

DOCTORS SUITES, approximately 1,000 square feet at 45c square foot including all bills and janitor. One block to hospital. Heights Med Arts Center, 411 West 21st Street, Houston, Texas. Call Irving Richie, 781-3138 or 862-2562. Write to 2100 Fountain View #29, Houston, Texas 77027.

LUBBOCK, TEXAS: FOR LEASE, professional office space for internists, adjacent to 500 bed general hospital in established medical community, within one mile of new medical school. 5,000 square feet available. Suites tailored for tenants. Phone Richard S. Duncan, 806-795-7003.

CLINIC FOR SALE: 3 man modern clinic with active general practice for sale. Building has x-ray and lab facilities and is adjacent to 35 bed recently remodeled hospital. Located 85 miles from Austin and Houston and 110 miles from San Antonio. Owners retiring. Please reply to Ad-607, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE: One Aloe Steeline examining table in good condition—white with black cushion top, stirrups, paper roll dispenser; also matching cabinet and stool. Five hundred dollars or best offer. Please reply to H. P. Redwine, M.D., P.O. Box 193, Snyder, Texas 79549. Telephone 915-573-2202.

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ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

FIGHTING CANCER WITH FILMS

...is not news. What's news is that our film program for professional medical audiences is the most ambitious ever launched against a single disease.

Approximately 30 films are now available (free on loan). The subjects include: chemotherapy, radiation therapy, cancer in children, nursing care of the cancer patient, rehabilitation, cancer sites—skin, stomach, mouth, colon and rectum, prostate, thyroid, breast, lung, uterus.

As pioneers in the usage of medical films, we know their value as teaching tools. They are a vital part of our professional educational programs. We hope you will contact your local ACS Unit about them.

American Cancer Society

OPPORTUNITIES FOR PSYCHIATRISTS

The Community Mental Health-Mental Retardation Centers of Texas have immediate and projected openings at several locations for psychiatrists at all experience levels. Applicants must be licensable in Texas.

Salaries are negotiable, depending upon training, experience and qualifications, to $42,000 per annum. An excellent package of fringe benefits supplements the basic salary. Adjunct practice is possible in most locations; and academic affiliation in some.

Respond with curriculum vitae to Farabee and Associates, 2665 Villa Creek Drive, Suite 148, Dallas, Texas 75234 or call collect (214) 243-6252. The Texas Community MH-MR Centers retain Farabee and Associates in their support.

Millions of dollars go into valuable cancer research and education...but very often, what gets action is a few words from you.

If you are one of the 3 of 4 physicians who do *not* teach your patients how to do breast self-examination*... do you know that *92% of women who receive personal instruction from their doctors, regularly practice breast self-examination?** It's your move.

american cancer society

*Statistics are from a Gallup Study conducted for the American Cancer Society.

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can ALCOHOLISM be treated in 2 weeks?

The Dallas-Fort Worth area offers one of the most unique treatment programs for alcoholism that is available in the world today.

It is a **medical** program 100% controlled by physicians who daily deal with a variety of psychosomatic and psychiatric problems. It includes—

- **Detoxification and Withdrawal**
- **Conditioned Avoidance Therapy . . .** habituation to alcoholic beverages is rapidly intervened.
- **Cognitive-Emotive Feedback Pentothal Interview . . .** a newly devised procedure that lets the patient recognize cues to drink, reasons for thinking and feeling the way he does, and breaks down denial and other aberrant defense mechanisms.
- **New-Life Management . . . teaches** alternative behaviors; **teaches** patients how to become non-drinkers; **teaches** ways of dealing with stress, anxiety, depression and the desire for an alcoholic "high"; introduces patients to follow-up and support facilities and therapists in their own communities.
- Evaluation and Treatment of Concurrent Physiologic and Emotional Problems
- Family, Marital and Vocational Counseling

The program is a common sense one based on what we **know** about the biochemistry, physiology, sociology, and psychology of alcohol addiction. There is no mystique involved and unproven modalities are not utilized.

RESULTS: In a study of 1000 patients treated from October 1970 to October 1974, 48% have achieved 4 year abstinence and 55% total sobriety for at least one year.

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• Member American Hospital Association & Texas Hospital Association
• J.C.A.H. Accredited as a full-service psychiatric facility
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Editorials

A NEW BREED OF LABORATORY WORKER

There are more than 3,000 Medical Laboratory Technicians (MLT) in the country today who have passed the Medical Laboratory Technician certifying examination given by the American Society of Clinical Pathologists.

The MLT is a relatively new category of laboratory personnel between the Certified Laboratory Assistant (CLA, ASCP), and the Medical Technologist (MT, ASCP). In general, the MLT must possess an associate degree, requiring a minimum of 60 semester hours or 90 quarter hours, including courses in biology and chemistry *plus* clinical training in a structured medical laboratory curriculum or a minimum of five years' acceptable laboratory experience. The MLT is capable of performing routine laboratory procedures in general areas of clinical chemistry, hematology, immunohematology, microbiology, serology, and urinalysis.

The structured medical laboratory technician programs were developed by a joint committee of the American Association of Junior Colleges and the National Council on Medical Technology Education. The committee was established in 1967, and its *Guide for Program Planning: Medical Laboratory Technician* was published in 1969. The two-year programs following these guidelines are restricted to junior or community colleges and involve a combination of academic and technical courses with clinical experience.

In Texas we have 11 Medical Laboratory Technician programs that are recognized by the Texas Education Agency. They are in colleges in Amarillo, Dallas, Denison, Houston, Laredo, Corsicana, Odessa, San Antonio, Hurst, Temple, and Tyler. Graduates receive the associate degree in applied science.

Since junior and community colleges serve the needs of their communities, the structuring and content of the various MLT programs are varied. For example, graduates of programs in metropolitan areas learn to use the SMA 12/60 and other sophisticated equipment. Graduates from less urban areas may not be able to do so, nor would they necessarily have to in their communities. Therefore, prospective employers should inquire whether an applicant has the competencies necessary for the position.

At El Centro College in Dallas, MLT students spend the academic school year in the college classroom completing courses in chemistry, biology, mathematics, English, etc, in addition to the medical laboratory technology courses. The latter courses are taught by a medical technologist (ASCP) utilizing both lecture and a simulated medical laboratory. The laboratory student-teacher ratio is 10 to 1. The summer months are spent in the clinical laboratories of affiliated hospitals and clinics, and the students rotate through the clinical laboratory departments.

The MLT program is one of seven programs in the Health Occupations Division of the College, and has an advisory board composed of at least one pathologist or one medical technologist, or both, from each of the affiliated clinical laboratories.

The program has produced graduates that have been well received in the Dallas area. The primary objective of this program is to produce qualified laboratory workers competent to perform routine benchwork in all areas of the medical laboratory.

Other MLT programs across the state are producing equally qualified medical laboratory technicians; these graduates could well fill the need for qualified laboratory workers in smaller communities.

Additional information may be obtained by contacting the coordinator of a nearby MLT program, or by writing to the Commission on Medical Laboratory Personnel, American Society of Clinical Pathologists, 2100 West Harrison Street, Chicago, Ill 60612.

Benita B. Mays, MA, MT (ASCP), Dallas.

Both often

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in freq and/or severity of grand mal seizure require increased dosage of standar convulsant medication; abrupt withd may be associated with temporary in crease in frequency and/or severity seizures. Advise against simultaneou gestion of alcohol and other CNS dep sants. Withdrawal symptoms (simila those with barbiturates and alcohol) occurred following abrupt discontinu (convulsions, tremor, abdominal and cle cramps, vomiting and sweating). addiction-prone individuals under ca

respond to one

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sound like depression.
is because her problem,
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ied by depressive symptom-
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provide relief for both—as
excessive anxiety is re-
ed, the depressive symp-
s associated with it are also
n relieved.

There are other advan-
s in using Valium for the
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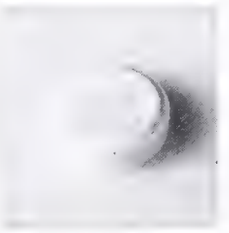
vement is usually apparent
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



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in psychoneurotic
anxiety states
with associated
depressive symptoms

eillance because of their predisposi-
to habituation and dependence. In
gnancy, lactation or women of child-
ring age, weigh potential benefit
nst possible hazard.

cautions: If combined with other psy-
tropics or anticonvulsants, consider
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ed; drugs such as phenothiazines,
otics, barbiturates, MAO inhibitors
other antidepressants may potentiate
ction. Usual precautions indicated in
ents severely depressed, or with latent
ression, or with suicidal tendencies.
Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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A proposal for Medicaid

Economic restraints . . . price indices . . . fee profiles. . . . We have been grappling with such terms of late in attempts to deal with the problems of physician reimbursement under both the Medicare and Medicaid programs. Now, the financial problems facing the Medicaid program in the state threaten the quality of care being delivered—this should not be allowed to happen.

The leadership of Texas Medical Association has suggested a possible course of action to resolve the problems of the Texas Department of Public Welfare (DPW) in administering this tax-supported program.

According to available information, there appear to be sufficient funds within the control of DPW to continue to furnish services at current levels, but the agency is deprived of the discretion to use all funds under its jurisdictions as it deems necessary. TMA has offered its support and assistance in seeking from the appropriate officials the latitude to utilize funds under its control as needed.

We have urged that services not be cut back, if it is at all possible. The services provided supply basic needs, and it would be difficult to render first-rate, quality care without them.

We have encouraged that tighter utilization control be conducted under medical auspices in DPW. The doctor's office should be used when it will suffice, rather than more expensive outpatient and inpatient facilities.

Further, we have expressed our continued concern to the DPW commissioner regarding allowances for physicians' fees under the Medicaid program. Reimbursement allowed by Medicaid is the lowest which Texas physicians receive for services to their patients. Continuation of these policies will discourage physicians from accepting welfare patients and force patients unnecessarily into hospital facilities, thus increasing the program's costs.

Medicaid patients will best be served by the participation of the greatest number of Texas doctors. We have recommended that reimbursement for Medicaid services be placed at the same levels as Medicare.

The proposed TMA plan of action urges greater utilization control over beneficiaries of the program to prevent overuse and abuse of the services by the recipients. However, we would oppose "locking-in" a beneficiary to a physician.

These recommendations have been offered in light of the principles adopted by TMA at the outset of the Medicaid program. The following excerpt from these principles seems particularly appropriate to the problems faced today: "The principle of quality medical care should be the primary consideration. The Title XIX Program should endeavor to maintain and to enhance the traditional doctor/patient relationship. The patient should have the right to select his own physician. The physician should be free to accept for treatment those patients whom he feels he can benefit. He should be free to select therapy which in his judgment should be the most beneficial to the patient."

Nym L. Barker, MD, President, Texas Medical Association.

Mar76

TexasMedicine

Winter conference report
Post-traumatic pulmonary insufficiency
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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.
Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.*; severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)
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ON THE COVER

Severe damage to the alveolar capillary endothelial cells leads to escape of blood plasma into the interstitium of the alveolar wall and subsequently into the alveolar space. The article beginning on page 45 offers case reports and a discussion of the condition known as shock lung.

NEXT MONTH

Articles scheduled for April are on missile injuries from power lawn mowers, induced abortion in Texas, physical loss in adolescence, and phycomycosis in a renal transplant recipient.

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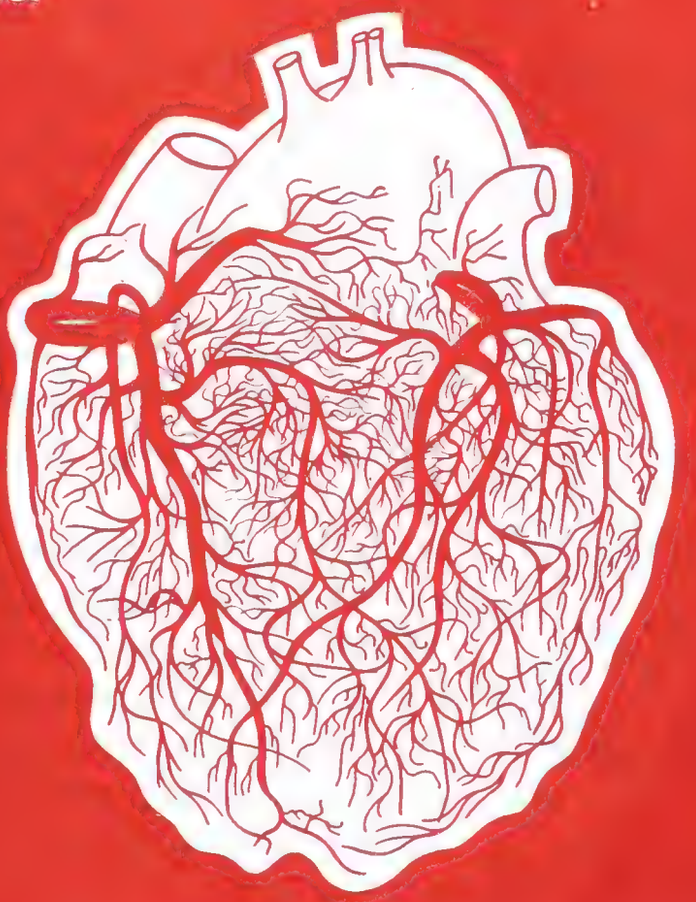

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Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.
Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.
Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

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NEWS

Executive Board considers PSRO developments; reiterates stand

Meeting in Austin on Jan 18, the Texas Medical Association's Executive Board reiterated its full support of previous policy positions taken on PSRO (professional standards review organization) by the House of Delegates in 1973 and 1974. These positions called for TMA to exercise all possible courses of action to repeal, amend, or substitute deleterious provisions of the PSRO law and to continue to strive for a single statewide plan.

The board reviewed the purposes for which the Texas Institute for Medical Assessment (TIMA) was established: to promote establishment of a single statewide PSRO area designation; to assure that traditional practice patterns and practice flows are not disrupted; to support local institutional review and coordinate review efforts across the state; to collect data and information which could be used in the enhancement of quality medical and hospital care; to assure that the review of medical and health care was performed by private practicing physicians; and to maintain a unified profession in Texas. Results of a recent TIMA poll indicated that 95% of physicians in Texas favor a statewide PSRO.

TMA representatives will go to Washington to visit Health, Education and Welfare Secretary David Mathews to present TIMA's proposal for a PSRO planning grant. The board recognized the need to proceed immediately with full operation of TIMA and to continue efforts toward establishing a single statewide PSRO in Texas. Also supported by the board were future PSRO amendments prepared by AMA and favorably considered by the TMA Council on Medical Legislation, and continued efforts to move forward on an inhouse peer review program. The board directed that letters of appreciation for their efforts on behalf of Texas physicians in establishing a statewide PSRO be sent to Sen Lloyd Bentsen and Reps Bill Archer, J. J. Pickle, Henry Gonzalez, Omar Burleson, Richard White, and Dan Rostenkowski.

Title XIX

The Executive Board voted to ask Texas physicians to exert the maximum voluntary leadership in ordering and providing different types of service to Title XIX patients. The board asked that physicians and all other providers be requested to exercise maximum voluntary re-

(Continued on p 14)

Conference speakers discuss legislative, election-year issues

The basic survival of capitalism will be the number one campaign issue in 1976 according to Richard L. Lesher, PhD, president of the US Chamber of Commerce.

"It will be presented under many banners, such as high taxes, big government, etc, but the most likely will be inflation—which is a concern to us all," he said. "But inflation is only the symptom of the disease. The disease itself consists of over-regulation and the unbelievable growth of government power and spending."

Dr. Lesher discussed current challenges to the free enterprise system in a talk before the 1976 Conference on Legislation and Medical Service sponsored by the Texas Medical Association Jan 17 in Austin.

Dr. Lesher said that the growth of government, government spending, and competition between the public and private sectors has prompted more fear in businessmen today about the survival of capitalism than at any time in recent memory. He pointed out that 71 million people comprise the work force in the private sector while 80 million people draw government checks of one kind or another.

Reporting on the proposed consumer protection act, Dr. Lesher said, "Some good news and some bad news—the bad news is that both the House and the Senate have passed the Consumer Protection Act. The good news is that the President has said he will veto it, and the vote in the House indicates his veto will be sustained." He further commented that a federal Consumer Protection Agency is the "last thing we need" in addition to the already established 305 offices of consumer protection at the federal, state, and local levels.

The secret of this country's success, Dr. Lesher stated, is embodied in its business system which places great premiums on competition, individual initiative, and corporate organization and management. He cited three ways in which government is crippling private economy—through direct competition with private firms, through competition for capital funds, and through excessive regulation.

"The Constitution does not guarantee happiness . . . only the right to pursue it. It does not guarantee economic, social or intellectual equality . . . only political equality. It does not guarantee economic security . . . only the liberty to seek it," Dr. Lesher told conference participants. He closed by urging those in the audience to work toward

Dr. Lesher

Dr. Beddingfield

Dr. Nesbitt

Rep Pickle

NEWS

Panel participants who discussed current medical issues included (l-r) C. Lincoln Williston, Dr. Rex Kirkley, and Dr. Sam Barnes.

TMA vice president, Dr. Walter Brooks, discusses professional liability developments with Dr. Don Webb (left) and Dr. Milton Davis (right), physician members of the Texas Medical Liability Study Commission.

restoring America to Americans through grassroots programs in public education, legislative action, and Chamber of Commerce activities.

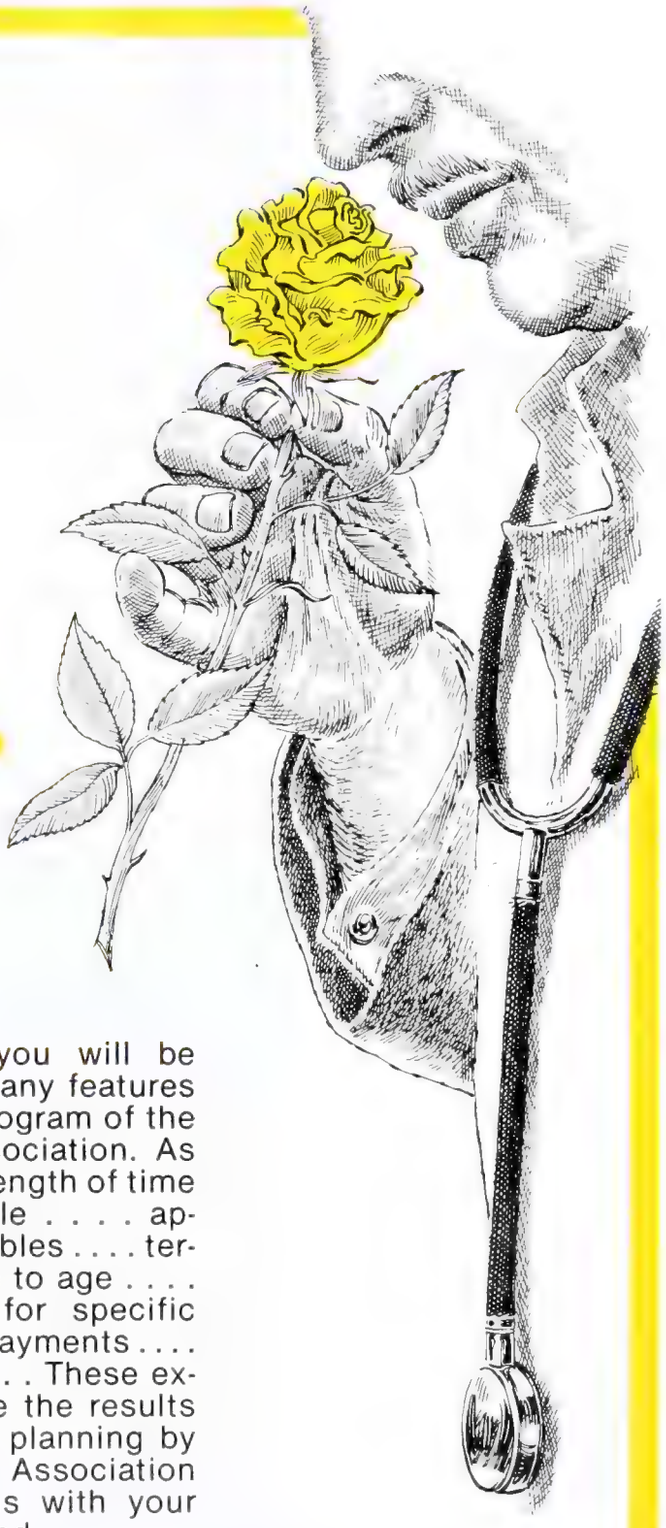
Predictions on NHI

Another featured conference speaker focused on the current status of national health insurance proposals. Dr. Edgar T. Beddingfield, Jr., chairman of the American Medical Association's Council on Legislation, said that it was the consensus of Washington observers that passage of national health insurance legislation is more remote today than one or two years ago. Dr. Beddingfield gave two basic reasons for this statement—the economy, and the restructuring of Congress which created a struggle over jurisdiction of health affairs.
Dr. Beddingfield predicted that the next step toward national health insurance would probably be some type of catastrophic protection which he said the AMA would support through the private sector. He said that the AMA would remain a part of the debate although its own national health insurance proposal was "on the back burner."
Dr. Beddingfield touched on other areas of legislative concern to physicians such as the recent amendment to the Social Security law. He called the changes in health maintenance organization (HMO) legislation a "flop," and said that the law has not been the catalyst toward prepaid health care as intended. He commended the Texas delegation to the AMA for efforts toward amendment of the Administrative Procedures Act. He expressed frustration with the ever growing federal bureaucracy and current rule-making abuses.

Medical education, manpower

Some misconceptions about the AMA, medical education, and manpower were laid to rest by Dr. Tom E. Nesbitt, speaker of the AMA House of Delegates.
He first rebutted the notion that the medical profession—through the AMA—has purposely limited the growth of medical schools to keep manpower down and incomes up, thereby fostering doctor shortages and preventing otherwise qualified students from a medical education. He said one has only to look at historical realities and the AMA record itself to refute the charge. He cited the dearth of funds during the depression and war years, increased costs of building and equipping a school, and the gradual drying up of the philanthropic, and some of the actual limitations to growth. He named numerous AMA actions which demonstrated that AMA programs and policies have been and continue to be positive rather than negative.
Dr. Nesbitt also denied the allegation that the AMA has imposed unreasonable educational and practice barriers before foreign-trained physicians and medical graduates. He quoted a 1926

take time to STOP AND SMELL THE ROSES...



We believe that you will be pleased with the many features of the Insurance Program of the Texas Medical Association. As examples . . . . the length of time benefits are payable . . . . application of deductibles . . . . termination dates due to age . . . . amounts payable for specific losses . . . . partial payments . . . . high maximums . . . . These excellent benefits are the results of years of careful planning by the Committee on Association Insurance Programs with your best interests in mind.

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AMA House of Delegates policy action which stated in part "that no undue obstacles should be placed in the way of the foreign physician of known qualifications who desires particularly to secure graduate medical education in this country." This policy has been expanded upon and reiterated numerous times in the past several decades according to Dr. Nesbitt. Most recently, at the 1975 clinical convention in Hawaii, the AMA adopted a report on foreign medical graduates which was openly praised by FMG representatives themselves.

The third misconception Dr. Nesbitt posed was the idea that through the establishment of the Coordinating Council on Medical Education in 1972, the AMA intends to phase out its traditional role in the accreditation of undergraduate and graduate medical education. "That idea has no basis in fact," he stated. "To the contrary, the new structure marks a promotion rather than a demotion of our role."

He explained that the council has five parent groups—the AMA, the Association of American Medical Colleges, the American Hospital Association, the American Board of Medical Specialties, and the Council of Medical Specialty Societies. "The purpose of the CCME is to study and recommend broad, cooperative, general agreements covering all phases of medical education," he said.

Dr. Nesbitt emphasized that any recommendations, policies, or programs adopted by the Coordinating Council on Medical Education must be approved by all the parent members. He also pointed out that the AMA Council on Medical Education, along with its various advisory committees, still responds directly to the wishes of the AMA in the area of medical education and manpower.

He commented, "In short, the CCME is nothing more or less than a formal mechanism which allows not only one hand to know what the other hand is doing, but allows us to know what all the fingers are doing as well. Therefore, the new system serves to expand, rather than contract the AMA's role in medical education."

Dr. Nesbitt pointed out the federal government's growing attempts to become involved in the area of medical education. In conclusion he urged each physician to support the AMA in its attempts to fight federal intervention in this field.

Congressional issues

The fourth major guest speaker was Rep J. J. Pickle of Austin, a member of the House Ways and Means Committee. Rep Pickle told the physicians of his participation the previous day in the ground-breaking ceremony for the Buescher Division of The University of Texas Environmental Science Park. The division will serve as a major carcinogenesis research area and an ecology study area where flora and fauna will be studied in a natural and comparatively primitive setting. Rep Pickle called the park the beginning of a "world health center."

Turning to congressional issues, Rep Pickle called 1975 a "very trying year for the country." He said the jurisdictional dispute in the first session of the 94th Congress was the roadblock to attempts to pass some form of national health insurance. He said that although hearings on the subject would resume shortly, it was unlikely that national health insurance would be passed in 1976. "But not because we're not going to have it," he added. He said he plans to support a program of national health insurance and indicated that he agreed with the goals set forth by the medical profession in this area.

The congressman discussed other topics of concern to physicians. He congratulated Texas physicians on the recent successes in regard to PSRO. Although he had supported the amendment in Congress, Rep Pickle admitted, "I didn't think you would get a single PSRO." He said he felt

Curbstone Consultation discussions such as the two pictured above were a popular feature of the January conference.

that with the recent favorable legislative and judicial actions Texas would ultimately be named a single PSRO area.

In closing, Rep Pickle discussed the spirit of conservatism which is afloat in the Congress. He said Congress is trying to set a limit on budget matters in response to the public's desire for less big government.

Achieving effective representation

Dr. Sam Nixon of Floresville, chairman of the TEXPAC Board of Directors, told the conference participants that effective representation at all levels of government can be achieved through the election of men and women "who will give our profession a fair hearing on medical issues."

He commented, "We want no part of a candidate whose vote can be purchased. But neither do we want in office someone who is predisposed against the profession or its ability to provide quality health care to the people it serves."

Dr. Nixon said that TEXPAC, the political arm of Texas medicine, was formed to deal with the government's growing involvement in health care. He said the political action committee is "non-partisan, pragmatic and not afraid of a good political fight to achieve its goals." He added that through the establishment of Branch PACs in the ten largest county medical societies that TEXPAC will be more aggressive and more effective in 1976 than ever before. He noted that the group includes over 400 physician

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and auxiliary members working in every county medical society in Texas.

Dr. Nixon urged the physicians to support TEXPAC and to participate in the May 1 primary and Nov 5 general elections. He said that the profession should show its leadership in 1976. He closed by telling the audience "Political aloofness is no virtue. Political inactivity is a certain vice."

Professional liability update

A panel session during the day-long conference covered the recent developments in the area of professional liability insurance. Included in this discussion was the presentation of some preliminary figures from the TMA survey on professional liability insurance.

Paul D. Gray, director of TMA's Department of Medical Service, said that 95% of the survey's respondents indicated that they carried professional liability insurance. Of those without coverage, 47% said the premium was too high. The number of physicians forced to reduce the scope of their practice to obtain coverage included 20% of those in family practice and 8% of those in other areas of private practice.

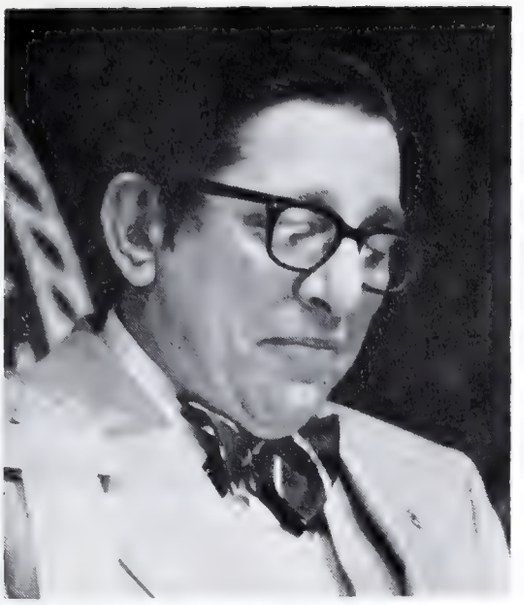
The respondents indicated that 28% of them had had a suit or claim filed against them. Of this group, 20% had had one suit or claim filed; only .1% had had more than four. Because of the threat of a lawsuit, 66% of the respondents in private practice now order more lab tests; 67% require more x-rays; 65% use consultants more; 48% hospitalize more patients; 50% delegate less responsibility; and 51% limit procedures performed.

The survey also indicated that 48% of those in private practice were forced to raise their fees in 1975 because of increases in their insurance premium. An overwhelming majority, 92%, said they will raise their fees in the future if the insurance premium rises. The complete and final results of the survey will be published in *Texas Medicine* when available.

Other comments on the professional liability insurance problem were presented by the two physician members of the Texas Medical Professional Liability Study Commission, Dr. E. Don Webb of Houston and Dr. Milton V. Davis of Dallas. Dr. Webb said the commission is convinced of the crisis situation in the state. He said he personally believes the commission will look favorably to the 22-point TMA policy position on the matter. He further stated that he was pleased with the progress thus far and felt that the legislature will be influenced by recommendations of the commission.

Dr. Davis commented on the various

A panel of experts answered questions on professional liability insurance. (See related feature, p 98).



Dr. Sam Nixon, chairman of TEXPAC's Board of Directors, encouraged conference participants to become involved in the 1976 election process through the political action committee.

functions which TMA can perform to draw special attention to some of the areas of this problem. He urged physicians to maintain careful, accurate records of all findings and all happenings relating to patients and to strive toward the utmost in objectivity, reserving opinions for areas where the expression of an opinion is essential to the care of a patient.

Dr. Davis also emphasized the strong reliance of the commission upon TMA's 22-point policy in its deliberations. He, too, urged doctors to become involved in the election process through support of TEXPAC.

Other current issues discussed

Also on the conference agenda was a panel discussion on other current medical issues including PSRO (professional standards review organization), Medicare and Medicaid, and health planning. Speakers included C. Lincoln Williston, TMA executive director; Dr. A. Rex Kirkley, chairman of the TMA Council on Tax-Financed Health Care Programs; and Dr. Sam R. Barnes, chairman of the TMA Committee on Health Planning.

Mr. Williston reported on the background of PSRO and the two latest developments in efforts to have Texas named as a single PSRO area. The U S District Court declared the nine designated areas in Texas to be unlawful and invalid, and referred the issue back to the secretary of the Department of Health, Education and Welfare. In addition, the President signed into law an amendment which calls for a poll of physicians which may permit Texas to secure a single PSRO system.

Dr. Kirkley reviewed current problems in the Medicare and Medicaid programs. He said that Congress has extended the waiver of the Medicare requirement of 24-hour nursing coverage of hospitals to Jan 1, 1979. He said this affects many small Texas hospitals. He also discussed the current attempts to get permission for the Department of Public Welfare to transfer funds from other areas to the Medicaid program. Dr. Kirkley also indicated that the Council would take immediate steps to protest the recent change in the CHAMPUS (Civilian Health and Medical Program of the Uniformed Services) reimbursement policy. [See Executive Board article p 14.]

Dr. Barnes discussed the implementation of the health planning law in the state. He reported that applications for designation as a Health Service Agency will be reviewed from mid-January to mid-February and that the decision on conditional designation and funding is due March 31 by the secretary of HEW. Dr. Barnes indicated that there could be some delay in this timetable. He encouraged each county medical society to support its representatives in the HSAs. He said that physician input will be especially important during the period of conditional designation.

The conference closed with five Curbstone Consultations on topics discussed throughout the day. A 90-minute cassette tape highlighting the conference program may be obtained for $3.50 from the TMA Communication Department, 1801 N Lamar Blvd, Austin 78701.

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Executive Board

(Continued from p 6)

straint, to work toward directing and providing only essential services for patient safety during this period of fiscal difficulty while relying on the physicians and other providers to fullfill a key role in determining necessity. The board also agreed to ask physicians to participate in Medicaid and to render care to Medicaid patients as part of their overall responsibility.

Cancer information service

At the request of the Council on Scientific Advancement, the Executive Board supported cooperation with a cancer information service encompassing public information and education which is being developed at MD Anderson Hospital and Tumor Institute.

CHAMPUS

The Council on Tax-Financed Health Care Programs reported that payments to physicians for services rendered to military dependents and retirees covered under the CHAMPUS program were reduced to the 75th percentile of 1974 charges effective Jan 1. CHAMPUS formerly has paid at the 90th percentile, updated every six months. The board approved a council recommendation that Texas physicians be urged to direct bill all CHAMPUS patients, that TMA seek to change this administrative action of the Department of Defense, and that TMA seek from CHAMPUS agreement to pay 1975 services at 1975 rates.

Dr. Joe T. Nelson of Weatherford (left) was presented a plaque for his service as a board member of AMPAC. Presenting the honor was Dr. Edgar Beddingfield.

CPT

The board voted to poll Texas physicians to determine their willingness to use Current Procedural Terminology (CPT) should that coding system be accepted by the Bureau of Health Insurance.

These representatives of three health groups participated in the formal announcement of a joint project to help educate the poor on good health measures. Pictured are (l-r) Grant Burton, program director, Public Health Education Division, Texas Department of Health Resources; Dr. Mario Ramirez, chairman, TMA Committee on Health Care of the Poor; Mrs. Brad Oxford, president, TMA Woman's Auxiliary; Mrs. Paul Klinger, auxiliary representative to the TMA committee, and Dr. Fratis Duff, director, TDHR. Bilingual slide presentations and pamphlets, prepared by TDHR, will be distributed by the auxiliary to groups of economically disadvantaged persons.

The board agreed that TMA should seek to change a recent Bureau of Health Insurance policy which calls for identification by name and provider number on claim forms. This requirement would cause severe administrative difficulties for single specialty groups such as radiologists, and would escalate the cost of health care into millions of dollars.

Health education teacher certification

The Executive Board supported activities of the Texas Association of Health, Physical Education, and Recreation and the Texas Education Agency in their efforts to obtain separate certification for teachers of health education. Although the State Board of Education previously approved the separation of health education from physical education, the combined degree is still available. The Executive Board concurred that the combined degree should be abolished and that all teachers must have a minimum of 24 semester hours of health education to teach the subject in public schools.

House of Delegates format

The Council on Annual Session recommended that the format for sessions of the House of Delegates be modified for the 1976 Annual Session in Dallas. The board adopted the following schedule: opening session to begin at 8 am Thursday, May 6, followed by reference committee hearings at 10 am and the Blue Shield luncheon at 1 pm. The Friday and Saturday sessions are scheduled to begin at 8 am.

Communication activities

The Council on Communication presented the 1976 plan of action and communication on professional liability for physicians of Texas. The plan, referred to the Board of Trustees, outlined several approaches including maintaining public awareness of the need for legislation, involving physicians in public education and information activities, utilizing the office of the general counsel to acquaint members with the Texas legislative process, and involving physicians in contact with individual legislators on a one-to-one, hometown, off-session year basis.

Other actions

The board approved a recommendation of the Council on Community Health Affairs that the governor be asked to designate the week beginning April 4 as Rural Health Week in Texas. Also approved was establishment of a Section on Plastic, Reconstructive, and Maxillofacial Surgery as a scientific section of the association.
The next meeting of the Executive Board is scheduled for March 14 in Austin.

Writing competition deadline approaches

March 15 is the deadline for entries in the 11th annual Texas Medicine Award competition for excellence in scientific writing by a Texas medical student.
Articles must deal with subjects within the realm of the basic sciences or medicine. They must be original and unpublished. No maximum nor minimum length is required.
Judging will be based on the quality of scientific work and competence in writing. Each winner will be presented a certificate and a cash prize in ceremonies conducted at their respective schools. First place receives $300 with second place earning $100. The winning article will be published in *Texas Medicine* next fall.
Entries and inquiries should be addressed to Managing Editor, *Texas Medicine,* 1801 N Lamar Blvd, Austin 78701.

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Doctors urged to review professional liability offers

In a letter to the Texas Medical Association membership, Dr. R. Reagan Hicks, Jr., chairman, TMA Committee on Professional Insurance, urged doctors to evaluate and scrutinize professional liability insurance proposals on their merits.

"Over the past year," the letter read, "the officers and staff of the TMA have become aware of numerous personal solicitations, mass mailers, etc, from individuals, companies, agencies and organizations soliciting (1) membership in organizations and (2) the purchase of insurance. Most of these are offering the hope of lower premiums on malpractice insurance or collective action to solve the crisis. Some of these solicitations are bona fide and sincere, however, unfortunately some are what appear to be unfounded or mere 'membership boosters.' "

According to Dr. Hicks, it would not be proper for the TMA to endorse any particular malpractice insurance company nor to recommend or discourage membership in any particular organization. However, the Committee on Professional Insurance emphasizes that members should evaluate each such proposal carefully.

The committee urged physicians to seek professional legal advice prior to purchasing malpractice insurance or joining organizations related to this field. The committee further recommended that doctors review the background of the organization, its sponsors, participants, and capability to perform or provide the proper outlet for the physician consistent with the goals to be accomplished.

In evaluating malpractice insurance companies, the committee suggested that such things as financial structure, reserves, management, board of directors, license to do business in Texas, ratings, claims experience, type of policy offered, classification procedure, rates of coverage, stability and ability to pay claims years in the future should be checked out by the physician or his advisors.

CHAMPUS reimbursement revised by government

Effective Jan 1, 1976, the Department of Defense directed CHAMPUS (Civilian Health and Medical Program of the Uniformed Services) to establish reasonable fees for medical service based on customary charge data submitted in calendar year 1974. The area prevailing fee developed from this information will be computed at the 75th percentile.

Formerly, reasonable fees were determined from the customary charge for a service based on 1975 data with the area prevailing fee at the 90th percentile of customary charges. The county is the basic geographic area in calculations.

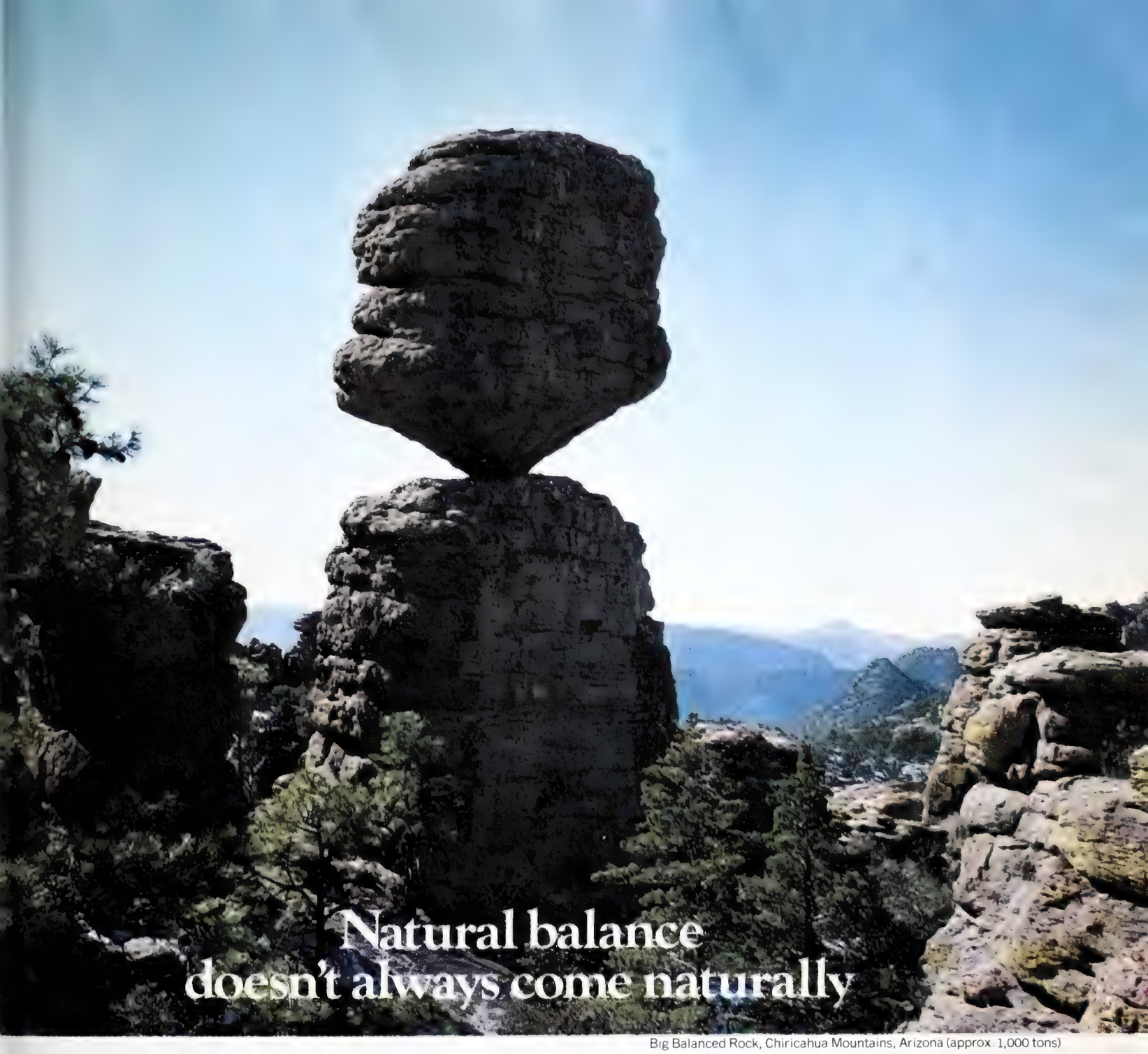
This revised method of calculating fee profiles will result in changes in the amounts paid under CHAMPUS. The Texas Medical Association is taking action to protest this ruling.

Influenza being monitored in schools, industry, hospitals

An early warning system against influenza has been put into operation in Texas through the Texas Department of Health Resources.

Influenza is being monitored through 19 school systems, 12 industries, and 13 large hospitals. These monitoring units are distributed in such a way as to detect illness in any part of the state at any time. Weekly data is regularly communicated to the Bureau of Communicable Disease Services headed by Dr. M. S. Dickerson.

As the new year got underway, Dr. Dickerson said there had been no



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

- Found useful in the management of vertigo* associated with diseases affecting the vestibular system.
- Can relieve nausea and vomiting often associated with vertigo.*
- Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.
- Also available as Antivert (meclizine HCl) 12.5 mg. scored tablets, for dosage convenience and flexibility.
- Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for nausea, vomiting and dizziness associated with motion sickness.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

ROERIG Pfizer
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Antivert®/25
(meclizine HCl) 25 mg. Tablets
for vertigo*

DYAZIDE®

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Each capsule contains 50 mg. of Dyrenium® (triamterene, SK&F) and 25 mg. of hydrochlorothiazide.

MAKES SENSE

TRIAMTERENE CONSERVES POTASSIUM WHILE HYDROCHLOROTHIAZIDE LOWERS BLOOD PRESSURE

FOR LONG-TERM CONTROL OF HYPERTENSION*

Serum K^+ and BUN should be checked periodically. (See Warnings Section.)

Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

* **Warning**
This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

SK&F Co., Carolina, P.R. 00630
Subsidiary of SmithKline Corporation

outbreaks of influenza in the state.

He added that it may be coming. Influenza of the A-Victoria strain has been isolated in Hawaii. Since there is heavy travel between Hawaii and the mainland, it can be expected to be brought in, Dr. Dickerson said.

Health departments in Austin, Fort Worth, Houston, Dallas, Waco, and Amarillo, together with public health region headquarters in Harlingen, Abilene, El Paso, Lubbock, and Tyler, are primary reporting points. They receive reports from other towns and from hospitals near them. These hospitals are: Hendricks in Abilene; Shannon in San Angelo; Medical Center in Tyler; Memorial in Corpus Christi; Mercy in Laredo; R. E. Thomason in El Paso; Providence and Hillcrest in Waco; Methodist in Lubbock; Northwest Texas in Amarillo; Parkland in Dallas; Brackenridge in Austin; John Peter Smith in Fort Worth; and Ben Taub in Houston.

Prominent authors among Annual Session guest speakers

Of the out-of-state guest speakers attending the 1976 Texas Medical Association Annual Session, to be held in Dallas May 6-9, are many who have recently published articles concerning their research.

On the subject of respiratory diseases, Dr. Nicholas R. Anthonisen, professor of medicine at the Respiratory Investigation Unit, University of Manitoba, Winnipeg, and his associates published "Demonstration of Airway Closure in Man" in the June issue of *Journal of Applied Physiology*.

In the April issue of *Chest*, Dr. Oscar Auerbach, senior medical investigator at the Veterans Administration Hospital, East Orange, NJ, wrote "Histologic Type of Lung Cancer in Relation to Smoking Habits, Year of Diagnosis and Sites of Metastases."

Dr. Auerbach is widely recognized as an authority on lung cancer and its relationship to smoking.

Dr. David G. Bragg, guest of the TMA Section on Radiology, published yet another aspect with his manuscript "Radiology in Lung Cancer: Problems and Prospects" in the September-October issue of *Ca - A Cancer Journal for Clinicians*.

Drs. T. Berry Brazelton of Harvard Medical School and John E. Lewy of Cornell Medical Center were among those whose articles on pediatrics appeared nationally. Dr. Brazelton is on the staff of *Redbook* magazine of New York. His 1972 article in that magazine, "The Children Who Can't Sit Still," won the Association for Children With Learning Disabilities Certificate of Merit. Dr. Lewy, who is professor of pediatrics and director of the Division of Pediatric Nephrology at the New York Hospital-Cornell Medical Center, and his coauthor, Dr. D. M. Moel, published in the January 1975 issue of the *American Journal of Medicine* with their article "Growth in Children With Renal Failure." In the August *Journal of Pediatrics*, Dr. Lewy again coauthored the article, "Nephrosonography in the Evaluation of Renal Failure and Masses in Infants."

The guest of the TMA Section on Surgery, Dr. William J. Fry, was the coauthor of two recent articles. In the March 1975 edition of the *Journal of Surgical Research*, Dr. Fry's paper "Comparative Evaluation of Vein Graft Preparation Media: Electron and Light Microscopic Studies" appeared. And in the May issue of *Archives of Surgery*, he and his associates published "Arterial Fibrodysplasia: Histopathologic Character and Current Etiologic Concepts." The August issue of the *American Journal of Cardiology* carried an article entitled "Variant Angina Pectoris: Clinical and Anatomical Spectrum and Results of Coronary Bypass Surgery," by Dr. Adolph M. Hutter, Jr., and several coauthors. Dr. Hutter is the director of

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the Cardiovascular Division at the Massachusetts General Hospital in Boston, as well as assistant professor of medicine at the Harvard Medical Center. He will be the guest of the TMA Section on Cardiovascular Diseases.

Dr. Frank L. Weakley, of the Department of Colon and Rectal Surgery at the Cleveland Clinic Foundation, wrote on "Recognition in the Operating Room" in the April issue of *Diseases of the Colon and Rectum*. Dr. Weakley will speak to the Section on Colon and Rectal Surgery on "Choice of Operation for Cancer of the Colon and Rectum" and "Selective Proctology." Also on the subject of surgery, Dr. John M. Tew, Jr., of Cincinnati published "The Treatment of Trigeminal Neuralgia in the Aged by a Simplified Surgical Approach" in the September *Geriatrics*. "Treatment of the Fractured Larynx by a New Grafting Technique," in the March 1975 *Archives of Otolaryngology* was submitted by Dr. Karl M. Morgenstein, clinical associate professor of otolaryngology at the University of Miami School of Medicine. Dr. Morgenstein will be the guest of the TMA Section on Otolaryngology.
The guest speaker for the Section on Digestive Diseases, Dr. Fred C. Kern, Jr., also coauthored a number of articles during the past year. The August edition of *Gastroenterology* carried his manuscript "In Vivo Effect of Bile Salts and Cholestyramine on Intestinal Anaerobic Bacteria."

"Causalgia" was discussed by Dr. John A. Downey in *Archives of Physical Medicine and Rehabilitation*, February 1975. Dr. Downey is the Simon Baruch Professor and chairman of the Department of Rehabilitation Medicine at the Columbia University College of Physicians and Surgeons in New York City. He will be the guest speaker for the TMA Section on Physical Medicine and Rehabilitation.

A&M to proceed with medical program

Texas A&M University officials have announced plans to proceed with the school's medical education program.
According to Dr. James A. Knight, A&M dean of medicine, a "letter of reasonable assurance" has been issued by the American Medical Association's Liaison Committee on Medical Education and the Association of American Medical Colleges. The medical program is being developed in cooperation with Baylor College of Medicine in Houston, Scott and White Memorial Hospital and Clinic in Temple, and Veterans Administration hospitals in Marlin, Waco, and Temple.
The joint effort will be supported by a $17 million grant from the Veterans Administration. A&M plans to enroll the first class of students in January, 1977. The students will begin their formal medical training following their second year of undergraduate study.

Journal rates increased

Subscription rates to *Texas Medicine* have been raised by recent action of the Texas Medical Association's Board of Trustees. The increase was necessitated by rising publication costs such as printing and postage.
Subscription rates for non-members have been increased to $8 per year, with foreign subscriptions at $14. The rate for libraries, hospitals, and universities has been changed to $6. The rate for medical students is now $4; the cost for individual issues, $1.25. The dues allocation for each regular member for publication of the journal has been raised to $4.
Existing subscriptions will be honored at the previous rates. New subscriptions will be billed at the above rates.

Delegates to consider constitution change

One change in the Texas Medical Association Constitution which was brought before the House of Delegates in 1975 will be voted upon by the delegates at the upcoming Annual Session in May in Dallas.

The change would amend Article VII, Section 1, page 6, to read as follows: (changes in italics)

"Sec 1. The House of Delegates shall constitute the legislative body of the Association. The membership of the House of Delegates shall consist of (1) Delegates, elected in accordance with this Constitution and Bylaws, and ex officio; (2) the President, the President-Elect, the Vice President, the Immediate Past President, the Secretary, and the Treasurer; (3) Councilors; (4) Trustees; (5) the Speaker of the House of Delegates; (6) Vice Speaker of the House of Delegates; (7) Texas delegates and alternate delegates to the American Medical Association; (8) *three members elected at large to the Executive Board from members currently serving in the House of Delegates*; and (9) the members of the Council on Medical Legislation and the several chairmen of the other respective councils."

Resident workshops scheduled by TMA, AMA

Two practice management workshops for senior residents will be conducted March 16-17 at Houston's Marriott Motor Hotel and March 23-24 at Dallas' Hyatt House.

Sponsored jointly by the Texas Medical Association and the American Medical Association, "Establishing Yourself in Medical Practice" is designed for senior residents who will be entering the private practice of medicine within 18 months. The two-day workshops include discussions on personnel problems, patient flow techniques, physical aspects of the medical office, clinical and financial paperwork, practice setting, and legal aspects of the practice of medicine.

The workshops will be conducted by Conomikes Associates, a medical consulting firm.

Registration for each workshop is limited to 30 residents. The registration fee is $95 for residents who are members of a county medical society and TMA, and $125 for residents who are not members of any component of organized medicine.

Registration requests and inquiries should be directed to Paul D. Gray TMA, 1801 N Lamar Blvd, Austin 78701.

Construction begins on science park

Ground-breaking ceremonies marking construction of new conference and research facilities at the Buescher Division of The University of Texas Environmental Science Park near Smithville were conducted Jan 16.

The park is part of the UT system cancer center headquartered at MD Anderson Hospital and Tumor Institute in Houston.

The park actually consists of two divisions. At the Buescher Division studies are being conducted of the chemical, physical, or biological agents which are natural or potential cancer-causing factors. The Camp Swift Division, located near Bastrop about ten miles from the main portion of the park, houses many species of animals used in research.

Initial construction will include a conference center, laboratory facility, and maintenance headquarters. Approximately 33,000 square feet of space is involved in the project.

The Buescher Division construction has been funded by a $1.25 million grant from the Economic Development Administration and matching funds from local appropriations of the UT cancer center.

The Dallas Advanced Seminars in Internal Medicine

April 26-29, 1976

**Wisdom enough to leech us of our ills is daily spun,
But there exists no loom to weave it into fabric.**

—Edna St. Vincent Millay

The Dallas Advanced Seminars in Internal Medicine announce the second annual course to be held April 26 through April 29, 1976, at Baylor University Medical Center, Dallas, Texas. The presentations will include formal lectures and informal small group seminars in all nine major subspecialty areas, totaling 24 hours, and are designed to meet the needs of the practicing physician who plans to take certification or recertification in Internal Medicine, or who seeks a comprehensive curriculum-type review of recent basic and clinical advances in Internal Medicine. Prospective applicants may for the sake of convenience enter their name and address on this announcement and mail to:

Albert Roberts, M.D.
Associate Dean For Clinical Affairs
University of Texas Southwestern Medical School
5323 Harry Hines Blvd.
Dallas, Texas 75235

NAME _____

ADDRESS _____

_____

_____

PRESCRIBING INFORMATION

Antiminth (pyrantel pamoate) Oral Suspension

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml.) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with pre-existing liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg. of pyrantel base/ml.) should be administered in a single dose of 11 mg. of pyrantel base per kg. of body weight (or 5 mg./lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 cc. of Antiminth per 10 lb. of body weight. (One teaspoonful = 5 cc.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg. pyrantel base per ml., supplied in 60 cc. bottles and Unitcups™ of 5 cc. in packages of 12.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

WORMS BLITZED

A single dose of Antiminth (1 cc. per 10 lbs. of body weight, 1 tsp./50 lbs.—maximum dose, 4 tsp.=20 cc.) offers highly effective control of *both* pinworms and roundworms.

Antiminth has been shown to be extremely well tolerated by children and adults alike in clinical studies.* Pleasantly caramel-flavored, it is non-staining to teeth and oral mucosa on ingestion... doesn't stain stools, linen or clothing.

One prescription can economically treat the entire family.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Pinworms, roundworms controlled with a single, non-staining dose of

ANTIMINTH®

(pyrantel pamoate)

equivalent to 50 mg. pyrantel/ml.

ORAL SUSPENSION

*Data on file at Roerig.

Please see prescribing information on facing page.

NEWS

News media representatives to receive TMA award

The Texas Medical Association has announced the 1976 recipients of its annual Anson Jones Award for excellence in communicating health information to the public.

Selected to receive engraved plaques and cash awards are: Mary Jane Schier, *The Houston Post*; Sue Dye, *Temple Daily Telegram*; Kathy Pill, *The Arlington Citizen-Journal*; Brenda Stone, *The Houston Post*; Thomas Winfield, editor, *Shell News*; Lee Wilcox and Steve Connelly, KGNC radio, Amarillo; Sharon Noble and John Miller, KXAS-TV, Fort Worth; and Dave Floyd, KXII-TV, Sherman.

Recipients of citations of merit have also been selected. They are: Lana Henderson, *The Dallas Times Herald*; Linda Little, *The Dallas Morning News*; Anna Burchell, *The Pampa News*; Bobbi Schott, *Medina Valley and County News Bulletin*; Karen Deike and Yvonne Saliba, *The Dallas Times Herald*; Carol O'Neil, *San Angelo Standard-Times;* Pauline Neff and Joy Spiegel, *Dallas Magazine;* Jeanie Stokes, KRLD radio, Dallas; news department, KTRH radio, Houston; Mike Lozano, Jr., KENS-TV, San Antonio; Cecil Burandt, KFDM-TV, Beaumont; Marsha McEuen and news department, KVUE-TV, Austin; and David Goldberg and Bob Sirkin, WFAA-TV, Dallas.

A record 97 entries were received in this year's competition.

Award plaques and a $250 cash prize will be presented to each winner at a special luncheon ceremony during TMA's 109th Annual Session in Dallas this May. Certificates will be presented to those selected for citations of merit.

Winning entries were selected on the basis of accuracy, significance, quality, public interest, and impact. All newspaper and magazine entries were evaluated by Roland Lindsey, Austin bureau chief, United Press International; Norris G. Davis, PhD, chairman, Department of Journalism, School of Communication, The University of Texas at Austin; and Pat Baldwin, assistant editor, *Texas Medicine*. Radio and television entries were reviewed by Rush Evans, general manager, KTBC-TV, Austin; Joe Roddy, news director, KTBC-TV; and Ken Moyer, general manager, KOKE AM-FM, Austin. TMA's Council on Communication made the final selection of winners.

The winning newspaper entries from Houston, Temple, and Arlington consisted of general coverage of medical and health subjects, while a series on prescription drugs won the award for Ms. Stone. The *Shell News* entry consisted of several articles focused on employee health.

"Panhandle Health Care—A Struggle for Survival," a ten-part series, was KGNC's winning entry. Stories on a bladder pacemaker and an intensive care nursery as well as general coverage given medicine and health secured the award for KXAS-TV.

KXII-TV took the award with a five-part series on the Texoma regional bloodbank.

TMA's medical journalism award, presented annually since 1956, is named in honor of the last president of the Republic of Texas, Dr. Anson Jones, a noted physician, statesman, and writer from early Texas history.

"We didn't get our seed grant."

Center for Disease Control issues smallpox statement

On Jan 17, a new recommendation regarding smallpox vaccination for hospital personnel was released by the Center for Disease Control in Atlanta.

The statement reads in part: "Smallpox is now occurring only in Ethiopia, and there it is rapidly being brought under control. This is the result of intensive and systematic worldwide efforts to eradicate the disease. Since the risk of smallpox importation into the United States is now essentially nil, the Committee no longer recommends systematic programs of routine vaccination of hospital and health personnel."

Vaccination is still necessary, according to the center, for travelers going to countries that require valid International Certificates of Vaccination, for travelers who have been in Ethiopia in the two weeks before returning to the United States, and for personnel of laboratories working with variola virus.

Index available

The 1975 Index for volume 71 of *Texas Medicine* is available to interested parties. Copies may be obtained by contacting the journal office, 1801 N Lamar Blvd, Austin 78701.

Encephalitis surveillance conducted by state

The guidelines for arboviral encephalitis surveillance for 1976 are being inaugurated by the Texas Department of Health Resources, according to Dr. M. S. Dickerson, chief, Bureau of Communicable Disease Services. Health agencies desiring to participate in this surveillance program are advised to contact the department's Bureau of Laboratories.

Dr. Dickerson explained that arboviral encephalitis is a mosquito-borne disease. The arboviral group of enchephalitides includes Western Equine Encephalitis (WEE), Eastern Equine Encephalitis (EEE), and Venezuelan Equine Encephalitis and are classified as Group A viruses. St. Louis Encephalitis is a Group B virus.

Although the true reservoir of these viruses (or means of winter carryover) is unknown, it appears that certain birds, rodents, bats, reptiles, or surviving adult mosquitoes could be implicated. Transmission of the virus to man and other hosts takes place through the bite of the infected mosquito.

The procedures of surveillance of the Department of Health Resources are aimed at detecting virus activity in birds, mammals, and mosquitoes long before the virus can be spread to the human population. The early detection of virus activity will enable the rapid implementation of mosquito abatement procedures, thus eliminating the vector transmission to man.

Dr. Dickerson said the current surveillance program covers the principal populated areas of the state.

The Bureau of Laboratories of the Texas Department of Health Resources receives shipments of mosquitoes, bloods from wild birds, domestic and wild animals, and sentinel chicken flocks periodically. Virus activity is reported to the local health departments.

Dr. Dickerson attributed the marked decline in encephalitis morbidity since 1967 in Texas to the surveillance techniques. Further intensification of the methods are envisioned for 1976 and future years.

An outbreak of St. Louis Encephalitis of smaller dimensions occurred in Harris County in 1975 when 33 cases were confirmed.

NEWS

Basic sciences examination set

The Texas State Board of Examiners in the Basic Sciences has set its next examination for April 9-10 in Houston.

Details as to time and place may be obtained by writing to the board's executive secretary at the following address: 319 Sam Houston State Office Building, Austin 78701.

Applications for the April examination must be received by the board by March 8.

Medical examiners administer exam

Meeting in Austin in early December, the Texas State Board of Medical Examiners administered examinations to 181 examinees.

Of this number, there were 19 clinicals, 129 fulls (FLEX), 25 foreign repeats, and eight domestic repeats.

There were 112 foreign medical graduate examinees.

The board gave the Federation Licensing Examination (FLEX) for the first time in December.

In other actions, the board approved 319 reciprocity applications for licensure and denied licensure to six reciprocity applicants. Of the reciprocity applications, 91 were foreign gradutes. There were seven duplicate licenses issued.

JCAH establishes special office

A special office within the Hospital Accreditation Program of the Joint Commission on Accreditation of Hospitals (JCAH) has been established for the sole purpose of focusing on problems and developments relating to environmental services and the application of the Life Safety Code of the National Fire Protection Association within accredited hospitals in the United States. The office will serve as a central source of information to JCAH on health care facility construction, design, engineering, and fire safety.

Safety and engineering experts staffing the new office will be responsible for ongoing consultation with appropriate external agencies and individuals within the life safety field toward the development of new and/or revised standards, policies, and procedures to be recommended to the JCAH Board of Commissioners for consideration. These same experts will review, clarify, and comment on Statements of Construction, submitted to JCAH by facilities seeking accreditation, as to the compliance of the data to JCAH standards.

It will be within the scope and purpose of this office to review and analyze reports of the Bureau of Health Insurance of the U S Department of Health, Education and Welfare, where validation surveys result in loss of "deemed" status because of violations of the Life Safety Code.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1 Year Ended 1/31/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+11.6%	−33.0%	− 6.2%	1.4%
Loomis-Sayles Mutual Fund	+ 8.4%	−21.0%	− 3.7%	3.2%
Mercantile Bank Equity Fund	+11.2%	−35.8%	−16.5%	3.5%
Mercantile Bank Fixed Income Fund	+ 2.2%	−13.5%	− 8.6%	7.9%
T Rowe Price Growth Stock Fund	+ 9.1%	−34.1%	− 1.9%	1.2%
T Rowe Price New Income Fund	− 0.2%	N/A	N/A	8.1%
Stein Roe & Farnham Balanced Fund	+10.3%	−24.9%	+ 4.1%	3.0%
Standard & Poor 500 Stock Average	+11.8%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+14.4%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: MALPRACTICE STUDY COMMITTEE. The Texas Medical Professional Liability Study Commission, meeting in Austin Jan 22, voted to support voluntary binding arbitration as an alternative to the current system of resolving medical disputes. It appears the commission has also agreed to support mandatory screening panels prior to the filing of a lawsuit in a medical professional liability suit. The commission has also agreed to support in concept a statutory proposal which would eliminate, in the words of Chairman Page Keeton, "all lawsuits relating to informed consent as a separate cause of action."

WASHINGTON: FTC COMPLAINT AGAINST AMA. The Federal Trade Commission has filed a complaint against the American Medical Association, the Connecticut State Medical Society, and the New Haven County Medical Association charging that the AMA's principles of medical ethics violate the antitrust laws by prohibiting solicitation of patients. The AMA has presented its position before an FTC administrator and an administrative judge. A ruling by this judge can be appealed to the full commission, and the commission's findings can be taken to the federal courts. AMA representatives have stated, 'It is ironic that the FTC should attack a code devised and operated as a standard of conduct in the best interest of the patient. Advertising by a professional is the very antithesis of professionalism. Physicians should not solicit patients. A patient should go to the doctor on the basis of need, not the basis of advertising."

AUSTIN: MEDICAID CUT-BACK AVOIDED. A possible cut-back in the Medicaid program in Texas has been avoided by state welfare board action which will transfer funds from what welfare commissioner Raymond Vowell described as the department's "earned federal funds" account that were not earmarked for any other program. Action was taken at the Jan 23 welfare board meeting. TMA President Dr. Nym Barker had urged that Medicaid services not be cut back and that tighter utilization control be conducted. In a letter to Commissioner Vowell and members of the welfare board, Dr. Barker pledged TMA support and assistance in obtaining transfer of funds for the financially strapped program. Continued concern again was expressed for the low level of reimbursement physicians receive under the Medicaid program, and Dr. Barker urged that reimbursement be set at the same levels as Medicare. Overuse and abuse of Medicaid services by recipients was cited, with the suggestion that welfare case workers monitor beneficiaries suspected of abusing the program.

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: GUBERNATORIAL APPOINTMENTS. Dr. D. Jack Kilian of Lake Jackson has recently been appointed to the Texas Air Control Board succeeding Dr. Albert Hartman, Jr., of San Antonio who resigned. Dr. Kilian is the director of industrial medicine in Dow Chemical's laboratories. Recent appointments to the Greater South Texas Cultural Basin include: Dr. Harold T. Branch of Corpus Christi replacing Judge John M. Turner, Dr. Fratis L. Duff of Austin replacing Dr. James E. Peavy, and Dr. Mario E. Ramirez of Rio Grande City replacing Mayor J. C. Martin, Jr. New physician members of the Drug Abuse and Advisory Council are Dr. Raul Rivera of El Paso replacing Dr. Russell L. Deter and Dr. Dale R. Rhoades of Crosbyton replacing Dr. Joseph Schoolar. Dr. H. H. Brindley of Temple was recently appointed to a jail standards commission.

WASHINGTON: WHITE HOUSE FORUMS REPORT. The President's Domestic Council, which held a series of forums across the country including one in Austin in October, has issued its report to the President. Vice President Nelson Rockefeller said in the document, "One overriding message came through in each of the forums: people are concerned about the proliferation of federal red tape which prevents the government from delivering its promised services." In summary, the report declared, "People feel that federal red tape, excessive bureaucracy, and duplication are inhibiting creativity and decision-making throughout American society."

OHIO: ACUPUNCTURE. The Ohio Supreme Court has ruled that acupuncture therapy constitutes the practice of medicine, and cannot be performed without a license to practice medicine. The court stated further that insertion of needles beneath the skin to alleviate pain, infirmity or disease, commonly known as acupuncture, constitutes the practice of medicine.

WASHINGTON: CATASTROPHIC HEARINGS SCHEDULED. Rep Dan Rostenkowski (D-Ill), chairman of the House Ways and Means Committee's Subcommittee on Health, announced that his subcommittee was to hold hearings on Feb 9, 10, and 11 on President Ford's state of the union proposal for catastrophic coverage for Medicare beneficiaries. The administration's witnesses were scheduled to offer their views the first day of the hearings. The AMA also expected to appear before the subcommittee.

WASHINGTON: JCAH RULING. The Joint Commission on Accreditation of Hospitals has amended its rules to make it clear that a physician's agreement to abide by hospital bylaws applies only to current bylaws that he has read and does not apply to future changes.

WASHINGTON: HEALTH BILLS. An assortment of health bills are on the agenda for 1976 session of Congress. The House-passed health maintenance organization (HMO) amendments measure, HR 9019, is on the agenda for further hear-

ing. The House-passed Health Manpower Bill, HR 5546, is waiting for mark-up by the Health Subcommittee of the Senate Labor and Public Welfare Committee. Also pending are bills providing for congressional review of administrative rulemaking, proposals for regulation on clinical laboratories, and various national health insurance proposals.

ILLINOIS: LAW OVERTURNED. The key provisions of the Illinois malpractice law have been found unconstitutional by an Illinois Circuit Court judge. The sections in the new law, which set a $500,000 limit of recovery in medical malpractice cases and established a medical review panel to screen suits to determine if they have sufficient merit to warrant a trial, were declared to be in violation of the equal protection and the due process clauses of both the US and the Illinois Constitutions. The judge said that by protecting health care providers against awards in excess of $500,000, the law effects a classification, without rational basis, and creates a class of defendants protected by this monetary limitation, which is violative of the US and the Illinois Constitutions. Spokesmen for the Illinois Department of Insurance indicated that the ruling would be appealed directly to the state's Supreme Court.

TENNESSEE: REVIEW BOARDS UNCONSTITUTIONAL. A Chancery Court has ruled the state's newly established review boards for medical liability claims unconstitutional. Under the provisions, part of the comprehensive form that went into effect July 1, all medical liability claims must go before a six member review panel prior to being filed in court. The Tennessee court, however, has ruled the panel interferes with the person's right to a speedy trial. An appeal to the state Supreme Court is expected shortly.

CALIFORNIA: JURY AWARD. A jury in San Francisco has awarded $60,000 to a general surgeon who contended that the local medical society conspired against him and tried to ruin his practice 13 years ago after he advocated enactment of the Medicare law. The jury awarded $20,000 in actual damages and $40,000 in punitive damages against the San Francisco Medical Society. In his suit, the surgeon contended that because of his views on Medicare, he was dropped from the staffs of four hospitals, thus losing much of his practice. He also contended that the medical society had interfered with his direct wire answer service. The doctor alleged that his malpractice insurance was cancelled although he had never had a claim filed against him. The doctor's original suit for $6 million against four hospitals and the society had been dismissed by a trial court. He appealed, and the 1967 trial was ordered. The 40-day jury trial in 1970 ended in a hung jury, and the judge ruled against him. He appealed again, and the new trial was ordered. The hospital settled out of court with the physician for $20,000. The medical society said it has not decided whether it will appeal the jury verdict against it.

AMERICAN PHYSICIANS INSURANCE EXCHANGE

AN OPEN LETTER FROM BUD WILKINSON

DEAR DOCTOR:

For the past five years I have served as Chairman of the Board of Planned Marketing Associates, a Texas based, nationally prominent insurance company. Two years ago our company, PMA, merged with the S. S. Kresge Company, operators of the well known K-Mart stores. Kresge is America's third largest retailer.

Approximately a year ago, a group of Texas doctors came to us seeking our professional help in assisting them in the establishment of an insurance company to meet the problems they were beginning to face in getting adequate malpractice coverage at acceptable rates. As you know, the problem of malpractice insurance is national in scope.

Since being contacted by a group of doctors in Texas, we have made the following progress:

- We have chartered and licensed a multiple-line casualty company in the State of Texas, AMERICAN PHYSICIANS INSURANCE EXCHANGE. API is a non-profit, DOCTOR OWNED AND CONTROLLED company.
- We have employed Mr. Graham Alexander, for 22 years the lead underwriter at Lloyds, London for U. S. malpractice coverage, to negotiate reinsurance for additional coverage to one million dollar limits for API MEMBER Policy holders.
- We have provided expert legal counsel to represent doctor interests.

TO REPEAT, The Company was established at the request of a group of doctors in Texas. To succeed, additional participants are needed.

FOR MORE DETAILED INFORMATION please contact me or our Company. Arrangements will be made to forward all pertinent materials for your consideration.

Yours very truly,

Bud Wilkinson

Charles "Bud" Wilkinson

FOR INFORMATION ONLY AND SHOULD NOT BE CONSTRUED AS AN ENDORSEMENT BY TMA.

AMERICAN PHYSICIANS SERVICE CORPORATION

1400 FRITO-LAY TOWER · DALLAS, TEXAS 75235 · PHONE (214) 350-5553

ALCOHOLISM COUNCIL OF TEXAS

US Senator William Hathaway (D/Maine) and Dr. Ernest P Noble, director of the National Institute on Alcohol Abuse and Alcoholism (NIAAA), will be featured speakers at the Texas State Conference on Issues in Alcoholism to be held Mar 21-23, 1976, in Arlington. Sponsored by the Alcoholism Council of Texas, the conference will seek to explore national trends, review state progress, examine critical issues and outline courses of action in alcoholism programming. Registration fee is $17.50 per person, with special group rates available.

Contact: 510 S Congress, Suite 406, Austin 78704.

SOUTHWEST CONFERENCE ON DISEASES IN NATURE TRANSMISSIBLE TO MAN

Texas A&M University, College of Veterinary Medicine, Office of Continuing Education, announces the 26th Annual Southwestern Conference on Diseases in Nature Transmissible to Man. The Conference will be held Mar 15-16, 1976, at the Rudder Center for Continuing Education on the campus of Texas A&M. The program will include general sessions plus sessions concentrating on brucellosis and the encephalitides.

Contact: Dr. WJ Kilpatrick, Chmn, Continuing Education Council, Texas A&M University, College of Veterinary Medicine, College Station 78843.

WESTERN INSTITUTE ON EPILEPSY

Dallas will be the site of the 27th Annual Western Institute on Epilepsy, to be held Mar 26-27, 1976, at the Fairmont Hotel. The symposium will feature leading experts in the medical, social and vocational management of seizure disorders. Hosting the meeting will be the Dallas Epilepsy Association, Epilepsy Foundation of America, and the UT Health Science Center at Dallas.

Contact: Box 12034, Dallas 75225.

COMING MEETINGS

CURRENT MEETINGS IN TEXAS

TEXAS ASSOCIATION OF OBSTETRICIANS & GYNECOLOGISTS, Sheraton-Fairway Motel, McAllen, Mar 12-13, 1976. Seminar on genetics as applied to the practicing obstetrician-gynecologist. Guest speakers, Drs. Fredrick Zuspan, Columbus, Ohio; Samuel Yen, LaJolla, Calif. Williard R Cooke Resident's Prize winner to be announced. Contact: Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

UT SYSTEM CANCER CENTER, 29th annual symposium on fundamental cancer research, Shamrock Hilton Hotel, Houston, Mar 10-12, 1976. Growth kinetics and biochemical regulation of normal and malignant cells. Subjects to be covered include biological aspects of growth kinetics, new methods of cell kinetics analysis, biochemistry of the cell cycle, regulation of growth kinetics, cell cycle-related events, growth kinetics, mathematical models, growth kinetics in experimental systems, application of growth kinetics information to human cancer therapy. Contact: Dr. Ronald M Humphrey, UT System Cancer Center, Texas Medical Center, Houston 77025.

CURRENT NATIONAL MEETINGS

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, Fairmont-Roosevelt Hotel, New Orleans, Mar 29-Apr 1, 1976. Clinicopathologic conference, scientific exhibits, general assembly luncheon, 17 speakers. Registration, $60; military courtesy registration fee, $30; students, residents, interns and fellows, complimentary registration. Contact: 1430 Tulane Ave, New Orleans 70112.

For other courses and symposiums, see Continuing Education Courses, pp 36-40.

Calendar of Listings

■ Denotes Texas Meetings

MARCH

■ ALCOHOLISM COUNCIL OF TEXAS, Arlington, Mar 21-23, 1976. 510 S Congress, Suite 406, Austin 78704.

ALPHA EPSILON DELTA, Tuscaloosa, Ala, Mar 31-Apr 3, 1976. 7 Brookside Circle, Bronxville, NY 10708.

AMERICAN ACADEMY OF ALLERGY, San Juan, PR, Mar 6-10, 1976. JO Kelley, Exec Off, 225 E Michigan St, Milwaukee 53202.

AMERICAN ASSOCIATION OF PATHOLOGISTS & BACTERIOLOGISTS, Boston, Mar 20-23, 1976. 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF PHYSICIANS, Honolulu, Mar 9-10, 1976. Dr. Bernard WD Fong, 97 Dowsett Ave, Honolulu 96817.

AMERICAN COLLEGE OF PHYSICIANS, Philadelphia, Mar 1-5, 1976. 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF PHYSICIANS, New York, Mar 10, 1976. Dr. Felix E DeMartini, 161 Fort Washington Ave, New York 10032.

AMERICAN DIOPTER & DECIBEL SOCIETY, San Diego, Calif, Mar 14-21, 1976. Dr. Albert C Esposito, Exec Dir, Suite 100, Medical Center Bldg, 420-422 11th St, Huntington, WVa 25701.

AMERICAN MEDICAL STUDENT ASSOCIATION, New Orleans, Mar 5-7, 1976. Louis R Giancola, Exec Dir, 1400 Hicks Rd, Rolling Meadows, Ill 60008.

AMERICAN SOCIETY FOR CLINICAL PHARMACOLOGY AND THERAPEUTICS, Seattle, Mar 18-19, 1976. 1718 Gallagher Rd, Norristown, Pa 19410.

ASPEN RADIOLOGY CONFERENCE, Aspen, Colo, Mar 1-5, 1976. Registration Division, 1818 Gaylord St, Denver 80206.

ASSOCIATION FOR THE ADVANCEMENT OF MEDICAL INSTRUMENTATION, Atlanta, Mar 21-25, 1976. 1901 N Ft Myer Dr, Suite 602, Arlington, Va 22209.

INTERNATIONAL ACADEMY OF PROCTOLOGY, India, Mar 17-Apr 4, 1976. Exec Offices, 147-41 Sanford Ave, Flushing, NY 11355.

NATIONAL CONFERENCE ON HIGH BLOOD PRESSURE CONTROL, New Orleans, Mar 28-30, 1976. Dr. Stanley B Garbus, Conference Coordinator, Louisiana State University Medical Center, 1342 Tulane Ave, New Orleans 70112.

NEVADA TUMOR REGISTRY OF THE NEVADA CANCER CONTROL INSTITUTE, Las Vegas, Nev, Mar 11-12, 1976. Ms. Irene S Peacock, 1800 W Charleston Blvd, Las Vegas, Nev 89102.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 29-Apr 1, 1976. 1430 Tulane Ave, New Orleans, La 70112.

SOUTHEASTERN SURGICAL CONGRESS, New Orleans, Mar 15-18, 1976. 315 Blvd, NE, Suite 500, Atlanta 30312.

■ SOUTHWESTERN CONFERENCE ON DISEASES IN NATURE TRANSMISSIBLE TO MAN, College Station, Mar 15-16, 1976. Dr. Warren Kilpatrick, Office of Continuing Education, College of Veterinary Medicine, Texas A&M University, College Station 77843.

■ TEXAS ASSOCIATION OF OBSTETRICIANS & GYNECOLOGISTS, McAllen, Mar 11-13, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

■ UT SYSTEM CANCER CENTER, 29th Annual Symposium on Fundamental Cancer Research, Houston, Mar 10-12, 1976. Dr. Ronald M Humphrey, UT System Cancer Center, Texas Medical Center, Houston 77025.

■ WESTERN INSTITUTE OF EPILEPSY, Dallas, Mar 26-27, 1976. Box 12034, Dallas 75225.

APRIL

AMERICAN ACADEMY OF NEUROLOGY, Toronto, Apr 26-May 1, 1976. Stanley A Nelson, Exec Off, 4015 W 65th St, Suite 302A, Minneapolis 55435.

AMERICAN ACADEMY OF PEDIATRICS, Philadelphia, Apr 12-15, 1976. Dr. Robert G Frazier, 1801 Hinman Ave, Evanston, Ill 60204.

AMERICAN ASSOCIATION OF ANATOMISTS, Louisville, Apr 20-23, 1976. Dr. John C Finerty, Pres, LSU Medical Center, Suite 1510, Canal LaSalle Bldg, New Orleans 70112.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Los Angeles, Apr 23-25, 1976. William T Maloney, Exec Off, 6 Beacon St, Boston 02108.

AMERICAN COLLEGE OF ALLERGISTS, Las Vegas, Nev, Apr 4-8, 1976. Eloi Bauers, JD, Exec Vice-pres/Counsel, 2100 Dain Tower, Minneapolis 55402.

AMERICAN COLLEGE HEALTH ASSOCIATION, Denver, Apr 27-30, 1976. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

AMERICAN COLLEGE OF PHYSICIANS, Philadelphia, Apr 5-8, 1976. Dr. Edward C Rosenow, Jr, 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF SURGEONS, Boston, Apr 26-29, 1976. Frank Arado, 55 E Erie St, Chicago 60611.

■ AMERICAN COLLEGE OF SURGEONS, New Mexico-El Paso Chapter, El Paso, Apr 10-11, 1976. Dr. Charles M Lyon, 1900 N Oregon, El Paso 79902.

■ AMERICAN GERIATRICS SOCIETY, INC, Houston, Apr 21-22, 1976. 10 Columbus Circle, New York 10019.

DIGESTIVE DISEASE WEEK, Miami Beach, Fla, Apr 22-27, 1976. Fred Kern, Jr, Pres, 4200 E 9th Ave, Denver 80220.

AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION, Palm Beach, Fla, Apr 27-28, 1976. Dr. LW Pratt, Sec, 37 Lawrence Ave, Fairfield, Me 04937.

AMERICAN FERTILITY SOCIETY, Las Vegas, Nev, Apr 5-8, 1976. Dr. JC Weed, Med Dir, 1608 13th Ave S, Suite 101, Birmingham, Ala 35205.

AMERICAN MEDICAL ELECTROENCEPHALOGRAPHIC ASSOCIATION, Savannah, Ga, Apr 7-11, 1976. Dr. WA Stephenson, Sansum Medical Clinic, Inc, PO Drawer LL, Santa Barbara, Calif 93102.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Cincinnati, Apr 24-29, 1976. HN Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN OTOLOGICAL SOCIETY, Palm Beach, Fla, Apr 25-26, 1976. Dr. GD Taylor, Sec-Treas, 221 Marshall Taylor Dr Bldg, Jacksonville, Fla 32207.

AMERICAN SOCIETY FOR ARTIFICIAL INTERNAL ORGANS, San Francisco, Apr 1-3, 1976. Mrs. KK Burke, Exec Dir, ASAIO National Office, Box 777, Boca Raton, Fla 33432.

AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY, Anaheim, Calif, Apr 11-16, 1976. Dr. GB Mider, Exec Off, 9650 Rockville Pike, Bethesda, Md 20014.

ASSOCIATION FOR THE ADVANCEMENT OF PSYCHOANALYSIS, New York, Apr 13, 1976. Dr. M Rendon, Sec, 333 E 30 St, New York 10016.

ASSOCIATION OF CONVALESCENT HOMES AND HOSPITALS FOR ASTHMATIC CHILDREN, Las Vegas, Nev, Apr 1-2, 1976. I Friedman, Exec Vice-pres, Spring Valley Rd, Ossining, NY 10562.

NATIONAL CONFERENCE ON RURAL HEALTH, AMERICAN MEDICAL ASSOCIATION, Phoenix, Ariz, Apr 8-9, 1976. Dept of Rural and Community Health, AMA, Division of Medical Practice, 535 N Dearborn St, Chicago 60610.

NATIONAL COUNCIL ON ALCOHOLISM, Washington, DC, Apr 9-10, 1976. Suite 1720, 2 Park Ave, New York 10016.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, Houston, Apr 9-10, 1976. 319 Sam Houston State Office Bldg, Austin 78701.

MAY

AMERICAN CANCER SOCIETY, San Francisco, May 27-29, 1976. 777 3rd Ave, New York 10017.

■ AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, Dallas, May 10-13, 1976. Dr. Warren H Pearse, Exec Off, 1 E Wacker Dr, Suite 2700, Chicago 60601.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, Dallas, May 15, 1976. Dr. RC Jones, Sec, 5323 Harry Hines, Dallas 75235.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, McAllen, May 20-23, 1976. Geraldine Midgley, Exec Off, Box 1287, Uvalde 78801.

AMERICAN RED CROSS, Portland, Ore, May 9-12, 1976. Convention Office, American Red Cross, 431 18th St, NW, Washington, DC 20006.

AMERICAN SOCIETY FOR GASTROINTESTINAL ENDOSCOPY, Miami Beach, Fla, May 27-28, 1976. Charles B Slack, Inc, 6900 Grove Rd, Thorofare, NJ 08086.

■ ASSOCIATION OF AMERICAN PHYSICIANS, Texas Chapter, Dallas, May 5, 1976. Dr. George E Holladay, 525 Bryan St, Denton 76201.

CONFERENCE ON AMBULATORY MONITORING, Atlanta, May 20-21, 1976. Nancy Jacobsen, Conference Coordinator, 315 University District Bldg, 1107 NE 45th, Seattle, Wash 98105.

CONFERENCE ON CUTANEOUS TOXICITY, AMERICAN MEDICAL ASSOCIATION, Washington, DC, May 17-18, 1976. Dept of Drugs, AMA, 535 N Dearborn St, Chicago 60610.

■ SOUTHWEST ALLERGY FORUM, San Antonio, May 22-25, 1976. Dr. Peter B Kamin, 601 Oak Hills Medical Bldg, San Antonio 78229.

SOUTHEAST EMERGENCY MEDICINE CONGRESS, Atlanta, May 3-5, 1976. Registrar, 1919 Beachway Rd, Suite 5C, Jacksonville, Fla 32207.

■ SOUTHWESTERN SURGICAL CONGRESS, Houston, May 3-6, 1976. Dr. Jack A Barney, Sec-Treas, 708 Physicians & Surgeons Bldg, Oklahoma City 73103.

■ TEXAS MEDICAL ASSOCIATION, Annual Session, Dallas, May 6-9, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Dallas, May 7, 1976. Dr. Frank J Kelly, Sec-Treas, Box 647, Amarillo 79177.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, Dallas, May 7-8, 1976. Dr. Jeff R Moore, Box 3755, Amarillo 79106.

■ UT MEDICAL BRANCH, Symposium on Philosophy and Medicine, Galveston, May 16-18, 1976. Dr. H Tristram Engelhardt, Jr, Institute for the Medical Humanities, UT Medical Branch, Galveston 77550.

JUNE

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Las Vegas, Nev, Jun 13-16, 1976. Dr. Richard H Moiel, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77025.

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Dallas, June, 1976. Dr. CB Shuey, Jr, Sec, 3500 Gaston Ave, Dallas 75246.

■ AMERICAN HEART ASSOCIATION, TEXAS CHAPTER, Houston, Jun 9-13, 1976. Box 9928, Austin 78766.

AMERICAN SOCIETY OF LAW AND MEDICINE, Boston, Jun 21-23, 1976. Dr. Elliot L Sagall, 454 Brookline Ave, Boston 02215.

■ AMERICAN MEDICAL ASSOCIATION, Dallas, Jun 27-Jul 1, 1976. 535 N Dearborn, Chicago 60610.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Houston, Jun 15-17, 1976. Dr. A Bryan Spires, Southwest Tower Bldg, Suite 900, 211 E 7th St, Austin 78701.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 19-22, 1976. Box 456, Sunland Park, NM 88063.

AMERICAN ASSOCIATION FOR REHABILITATION THERAPY, INC, Cleveland, Jul 12-16, 1976. Box 93, N Little Rock, Ark 72116.

AMERICAN CANCER SOCIETY, COLORADO DIVISION, Denver, Colo, Jul 16-17, 1976. 1809 E 18th Ave, Denver, Colo 80218.

AMERICAN SOCIETY OF ORAL SURGEONS, Chicago, Jul 17-18, 1976. 211 E Chicago Ave, Ste 930, Chicago 60611.

INDIANA UNIVERSITY, Institute for Sex Research, Inc, Bloomington, Ind, Jul 21-30, 1976. 416 Morrison Hall, Indiana University, Bloomington, Ind 47401.

INSTITUTE FOR CONTINUING EDUCATION, Heidelberg/Mainz/Hamburg, W Germany, Jul 13-24, 1976. 2405 Westwood Ave, Box 11083, Richmond, Va 23230.

INTERNATIONAL UROLOGY CONGRESS, Johannesburg, South Africa, Jul 25-30, 1976. c/o Festivals & Conventions Trust (Pty) Ltd, Box 61326, Marshalltown, 2107 Transvaal, Rep of South Africa.

INTERNATIONAL CONGRESS OF HYPNOSIS AND PSYCHOSOMATIC MEDICINE, Philadelphia, Jul 1-3, 1976. Dr. Martin T Orne, The Institute of Pennsylvania Hospital, 111 N 49th St, Philadelphia 19139.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, Colo, Jul 23-24, 1976. 1764 Gilpin St, Denver, Colo 80210.

■ TEXAS REHABILITATION ASSOCIATION, Dallas, Jul 11-14, 1976. Box 20040, Dallas 75220.

AUGUST

■ AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, Houston, Aug 1-6, 1976. 1725 K St, NW, Washington, DC 20006.

AMERICAN ASSOCIATION OF FOUNDATIONS FOR MEDICAL CARE, Boston, Aug 7-12, 1976. Box 230, Stockton, Calif 95201.

■ AMERICAN PODIATRY ASSOCIATION, Dallas, Aug 12-17, 1976. 20 Chevy Chase Circle, NW, Washington, DC 20015.

■ AMERICAN SOCIETY OF PARASITOLOGISTS, San Antonio, Aug 22-27, 1976. UT Health Science Center at Dallas, Dallas 75235.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 8-13, 1976. 1818 Gaylord St, Denver 80206.

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION, Tokyo, Aug 22-28, 1976. c/o Japan Medical Women's Association, 19 Kawadacho, Ichigayan, Shinjuku-ku Tokyo.

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*First Health and Nutrition Examination Survey, DHEW Pub. No. (HRA) 74-1219-1, National Center for Health Statistics, Rockville, Maryland. (This report indicates that approximately 95% of the children 1-5 years old had iron intakes *below* the standard set by the Food and Nutrition Board of the National Academy of Sciences.)

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CONTINUING EDUCATION COURSES

MARCH

Cardiovascular Disease

Title: Exercise Testing in Clinical Practice
Sponsors: UT Health Science Center, Houston; Baylor College of Medicine
Location of Course: UT Health Science Center at Houston, Auditorium
Date: Mar 5, 1976
Duration: 1 day, 6 hours instruction
Fee: To be determined
Designed For: General practitioners; Specialists in Cardiology
Credit: 6 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Chest Disease

Title: Postoperative Pulmonary Diseases
Sponsor: UT Health Science Center at Houston, Division of Continuing Education
Location of Course: To be determined
Dates: Mar 19-20, 1976
Duration: Continuous, 2½ days, 6-7 hours instruction per day
Fee: To be determined
Designed For: General practitioners; Specialists in Surgery, Internal Medicine
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Family Medicine

Title: Recent Advances in Clinical Immunology and Microbiology
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Mar 13-14, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 10 total course hours
Fee: $80
Designed For: General practitioners; Specialists
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Habilitation of the Deaf Child
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Date: Mar 27, 1976
Duration: Continuous, 1 day, 7 hours instruction
Fee: $40
Designed For: General practitioners; Specialists
Enrollment: Minimum, 10
Credit: 7 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Gastroenterology

Title: William Beaumont Gastrointestinal Symposium
Sponsor: William Beaumont Army Medical Center, El Paso
Dates: Mar 17-19, 1976
Duration: Continuous, 3 days, 4 hours instruction per day, 12 total course hours
Fee: None
Designed For: Specialists in Gastroenterology, Surgery, Internal Medicine
Enrollment: Minimum, 100; Maximum, 200
Credit: 12 hours, AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel
Contact: Col. J Loren Pitcher, MC, USA, Chief, Dept of Medicine, William Beaumont Army Medical Center, El Paso 79920

General Medicine

Title: Spring Clinical Conference
Sponsor: Dallas Southern Clinical Society
Location of Course: Statler Hilton Hotel, Dallas
Dates: Mar 15-17, 1976
Duration: Continuous, 3 days
Fee: $50
Designed For: General practitioners; Specialists
Credit: 25 hours, AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, live clinic, open question, panel, patient demonstration, seminar
Contact: Robert L Heath, Exec Officer, Dallas Southern Clinical Society, 3630 Noble Ave, Dallas 75204

Title: Texas Academy of Family Physicians—Spring Seminar
Sponsor: TAFP, Permian Basin Chapter, Alpine
Location of Course: Indian Mountain Lodge, Davis Mountains State Park, Fort Davis
Date: Mar 27, 1976
Duration: Continuous, 1 day, 6 hours instruction

Fee: $25
Designed For: General practitioners; Specialists
Credit: 6 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Dr. WB Pate, Secretary, TAFP, Permian Basin Chapter, 202 N Second St, Alpine 79830

Internal Medicine

Title: Alcoholic Liver Disease: Pathology, Pathogenesis, Complications and Treatment
Sponsors: A Webb Roberts Center for Continuing Education; Texas Commission on Alcoholism; American Association for Study of Liver Diseases
Location of Course: UT Health Science Center at Dallas
Date: Mar 27, 1976
Duration: Continuous, 1 day
Fee: None
Designed For: General practitioners; Specialists in Pathology, Internal Medicine
Credit: 4 hours, Category I, AMA Physician's Recognition Award
Teaching Method: Lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Malignant Disease

Title: 29th Annual Symposium on Fundamental Cancer Research: Growth Kinetics and Biochemical Regulation of Normal and Malignant Cells
Sponsors: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston; National Cancer Institute, Tex Division of American Cancer Society; UT Health Science Center at Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Mar 10-12, 1976
Duration: Continuous, 3 days, 6 hours instruction per day, 18 total course hours
Designed For: General practitioners; Specialists
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. George R Blumenschein, Assistant Director/Education, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, 6723 Bertner, Houston 77025

Title: Immunotherapy and Other Advances in the Management of Cancer
Sponsor: Wadley Institutes of Molecular Medicine, Dallas
Dates: Mar 26-27, 1976
Duration: 2 days
Designed For: General practitioners; Specialists
Enrollment: Maximum, 200
Credit: 16 hours
Teaching Methods: Audiovisual materials, open question, panel, seminar
Contact: Dr. JM Hill, Executive Director, Wadley Institutes of Molecular Medicine, 9000 Harry Hines, Dallas 75235

Medical Writing

Title: Medical and Technical Writing
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Dates: March and September, 1976
Duration: Intermittent, 1 day per week, 4 weeks, 2 hours instruction per day, 8 total course hours
Fee: $35
Designed For: General practitioners; Specialists
Enrollment: Maximum, 20
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Enrollee performs procedure, lecture
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Neurology

Title: Current Therapy in Epilepsy
Sponsors: Veterans Administration; Dept of Urology, UT Southwestern Medical School; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: Dallas
Dates: Mar 24-25, 1976
Duration: Continuous, 2 days
Designed For: General practitioners; Specialists
Credit: Category I, AMA Physician's Recognition Award
Teaching Method: Lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Otolaryngology

Title: Visiting Professor in the Dept of Otorhinolaryngology and Communicative Sciences
Sponsor: Baylor College of Medicine, Dept of Otorhinolaryngology and Communicative Sciences
Location of Course: Baylor College of Medicine, Texas Medical Center, Houston
Dates: Mar 18-20, 1976
Duration: Continuous, 3 days
Fee: To be determined
Designed For: Specialists
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, bedside rounds, clinical conference, lecture, panel
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Pathology

Title: Alcoholic Liver Disease: Pathology, Pathogenesis, Complications and Treatment (see INTERNAL MEDICINE)

Physical Medicine & Rehabilitation

Title: Fourth Intensive Course in Neuromuscular Diseases
Sponsors: Veterans Administration Hospital, Houston; Baylor College of Medicine, Houston
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Mar 25-27, 1976
Duration: Continuous, 3 days
Fee: None
Designed For: General practitioners; Specialists
Enrollment: Minimum, 200; Maximum, 300
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, live clinic, panel
Contact: Dr. Fred M Taylor, Dir, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Psychiatry

Title: Transactional Analysis 101 Workshop
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Mar 12-13, 1976
Duration: Continuous, 2 days, 12 total course hours
Fee: Individual, $50; Married couple, $75; Full-time student, $40
Credit: Part of the requirement for regular membership
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, panel, television
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, San Antonio 78284

Psychiatry

Title: Rorschach's Test: Intermediate Level Workshop
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Mar 20-21, 1976
Duration: Continuous, 2 days, 5-6 hours instruction per day, 11 total course hours
Fee: $75
Designed For: Specialists
Enrollment: Maximum, 20
Credit: 11 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, television
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio 78284

Surgery

Title: Peripheral Vascular Surgery
Sponsor: UT Health Science Center at San Antonio
Location of Course: Lakeway Inn, Austin
Dates: Mar 7-8, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 7½ total course hours
Fee: $120; Fellows, residents, $60
Designed For: General practitioners; Specialists
Enrollment: Minimum, 50; Maximum, 150
Credit: 7½ hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Fluids and Electrolytes in Surgical Practice
Sponsor: UT Health Science Center at San Antonio
Location of Course: Lakeway Inn, Austin
Dates: Mar 9-11, 1976
Duration: Continuous, 3 days, 4 hours instruction per day, 12 total course hours
Fee: $150; Fellow or resident, $75
Designed For: General practitioners; Specialists
Enrollment: Minimum, 50; Maximum, 150
Credit: 12 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Colon and Rectal Problems
Sponsor: UT Health Science Center at San Antonio
Location of Course: Lakeway Inn, Austin
Dates: Mar 12-13, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 10 total course hours
Fee: $120; Fellow or resident, $60
Designed For: General practitioners; Specialists
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Other

Title: Introduction to Clinical Application of Biofeedback
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Date: Mar 20, 1976
Duration: Continuous, 1 day, 7½ hours instruction
Fee: $90
Credit: AAFP; Category I, AMA Physician's Recognition Award
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

APRIL

Arthritis and Rheumatism

Title: What's New in Arthritis Diagnosis and Treatment
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Apr 10-11, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 10 total course hours
Fee: To be determined
Designed For: General practitioners; Specialists
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, enrollee performs procedure, lecture, live clinic, panel, patient demonstration, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Family Medicine

Title: Current Radiology for the Family Physician
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Apr 3-4, 1976
Duration: Continuous, 2 days, 5 hours instruction per day
Fee: $75
Designed For: General practitioners; Specialists
Enrollment: Maximum, 125
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Internal Medicine

Title: Medical Surgical Seminar
Sponsor: Travis Clinic Foundation, Jacksonville
Location of Course: Travis Clinic Foundation, Jacksonville
Date: April, 1976
Duration: 1 day
Fee: None
Designed For: General practitioners; Specialists in Internal Medicine, Surgery
Enrollment: Maximum, 60
Credit: 6 hours, AAFP Elective
Teaching Methods: Audiovisual materials, clinical conference, open question
Contact: Dr. James H Pesnell, Travis Clinic Foundation, Loop 456, Jacksonville 75766

Title: The Dallas Advanced Seminars in Internal Medicine
Sponsor: A Webb Roberts Center for Continuing Education, Dallas
Date: Apr 26-29, 1976
Duration: Continuous, 4 days, 6 hours instruction per day
Fee: $175
Designed For: General practitioners; Specialists in Internal Medicine
Credit: 24 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Obstetrics & Gynecology

Title: Gynecological Cytopathology
Sponsors: Texas Society of Cytology; A Webb Roberts Center for Continuing Education
Location of Course: Beasley Auditorium, Baylor University Medical Center, Dallas
Date: Apr 24, 1976
Duration: 8 hours
Designed For: Specialists in Pathology, Obstetrics & Gynecology
Teaching Methods: Audiovisual materials, lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Ophthalmology

Title: 13th Annual Baylor Ophthalmology Residents Alumni Meeting
Sponsor: Baylor College of Medicine, Dept of Ophthalmology, Houston
Location of Course: Baylor College of Medicine, Houston
Dates: Apr 2-3, 1976
Duration: Continuous
Fee: To be determined
Designed For: Specialists
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Orthopedic Surgery

Title: 12th Annual Orthopedic Symposium
Sponsors: Dept of Orthopedic Surgery, St. Luke's Episcopal Hospital; Baylor College of Medicine
Location of Course: St. Luke's-Texas Children's Hospital Auditorium, Houston
Dates: Apr 22-24, 1976
Fee: $150
Contact: Dr. Joseph Barnhart, Houston Orthopedic Clinic, 5620 Greenbriar, University Medical Center, Houston 77005

Psychiatry

Title: Group Psychotherapy
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Date: Apr 3-May 15, 1976
Duration: Intermittent, 7 Saturdays, 3 hours instruction per day, 21 total course hours
Fee: $125
Designed For: Specialists
Enrollment: Maximum, 12
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, open question, patient demonstration, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: WISC-R Workshop
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Apr 10, 1976; May 1, 1976
Duration: Continuous, 1 day, 7 hours instruction
Fee: $35
Designed For: Specialists
Enrollment: Minimum, 30; Maximum, 50
Teaching Methods: Audiovisual materials, open question, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Urology

Title: Recent Advances in Nephrology
Sponsors: American College of Physicians; UT Medical Branch
Location of Course: UT Medical Branch, Galveston
Dates: Apr 12-14 ,1976
Duration: 3 days
Fee: ACP members, FACP, Residents and Research Fellows, $100; Nonmembers, $150; ACP Associates, $50
Designed For: Specialists in Internal Medicine, Nephrology
Teaching Methods: Lecture, panel
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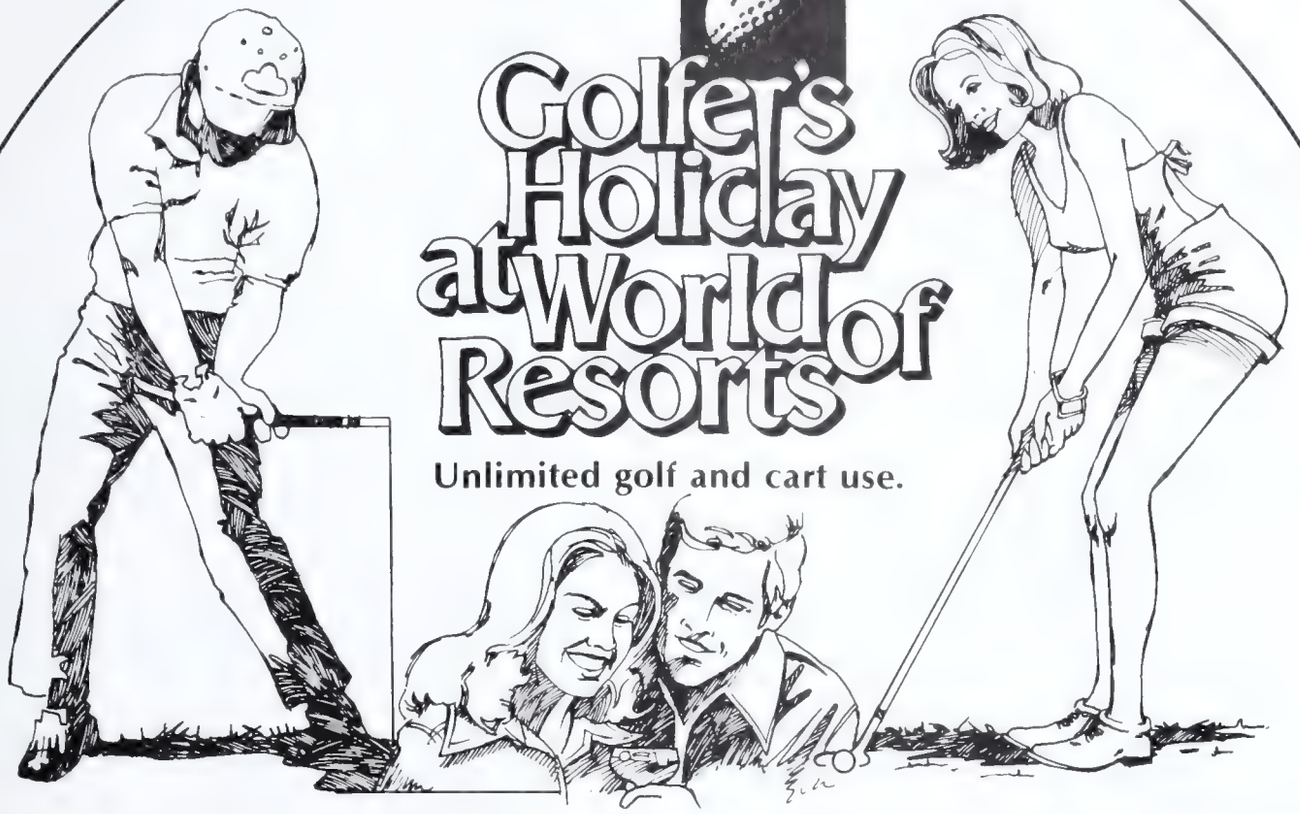

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Shock lung: disruption of alveolar capillary walls

S. Donald Greenberg, MD; H. Irving Schweppe, MD; Margie Harness, BA

Electron microscopic studies of shock lungs have revealed that the initial ultrastructural finding is severe damage to the alveolar capillary endothelial cells (the shock cells of the lung) which, in turn, leads to escape of blood plasma into the interstitium of the alveolar wall and subsequently into the alveolar space. It is concluded that disruption of the integrity of alveolar capillaries is the primary response to multiple pulmonary injuries all of which are manifestations of damage to the alveolar wall.

Studies of human lungs by electron microscopy have proved useful in contributing knowledge of the pathogenesis, pathophysiology, and subsequent clinical course of pulmonary diseases.[1] Such knowledge of the shock lung has come about because during the past several years improvements in mechanical ventilators and cardiovascular surgical techniques have resulted in the immediate salvage of an increasing number of patients with massive trauma.[2-5] Despite immediately successful resuscitation, however, many patients have developed signs and symptoms of shock lung 36 to 48 hours after injury, and died of respiratory failure with progressive hypoxia.[6-7] The nomenclature has varied, but post-traumatic pulmonary insufficiency has become a recognized syndrome. Other synonyms include white lung, wet lung, noncardiogenic pulmonary edema, and pump lung.[1] Many of the pathologic and hemodynamic factors have been documented, and there is little question that hemorrhagic shock plays a major etiologic role in its development.[8-9] Other documented contributing etiologies include oxygen toxicity, overwhelming infection, volume overload, alveolar hypoventilation with acidemia, extensive atelectasis, cardiogenic pulmonary edema, hypovolemia (particularly with pulmonary hypoperfusion), fat emboli, and multiple pulmonary microemboli.[10-14]

The clinical picture, regardless of etiology, is characterized by progressive tachypnea, progressive x-ray opacification, and progressive (often fatal), arterial hypoxemia. Widening of the alveolar-arterial oxygen gradient due to mismatch of ventilation and perfusion results from a significant amount of the cardiac output being shunted through areas of poorly ventilated or completely nonventilated lung. Increase in pulmonary water, alveolar instability, and alveolar collapse follow in rapid succession. Measurable lung volumes are reduced and the lungs become mechanically stiffer.

Current efforts to salvage shock lung patients, regardless again of etiology, include ventilation with large tidal volumes utilizing a volume cycle ventilator, positive end-expiratory airways pressure, and appropriate fluid and electrolyte management. In some circumstances, colloid infusions and diuretics are used early to reduce the increased lung water and intravascular volume contraction so commonly seen in these patients.

The electron microscopic studies of the lungs of two patients dying with shock lung serve as the basis of this report. The two cases were chosen because they represent classic examples of the early and late phases in the development of shock lung.

From the Departments of Pathology and Medicine, Baylor College of Medicine and St. Luke's Hospital, Houston, Texas.

Supported in part by the Albert and Martha Klein Respiratory Pathology Research Fund.

Case Reports

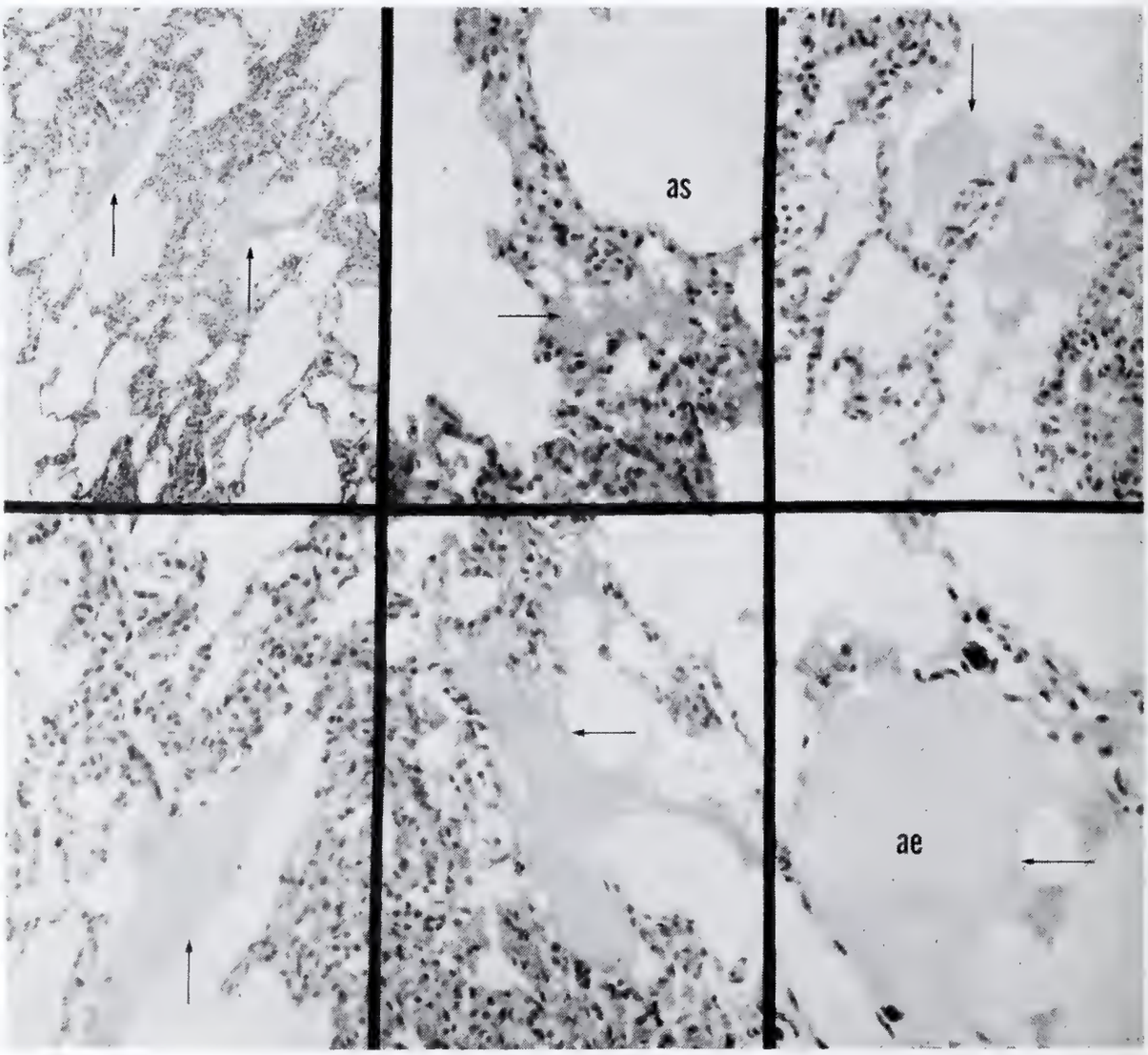
Case 1: A 36-year-old woman was brought to the emergency room with a gunshot wound (32-caliber weapon) in the right side of the chest. Her blood pressure was 40/0 mm Hg. Following transfusion of 8 units of blood, the patient's blood pressure rose to 80/0 mm Hg. The patient was taken to surgery approximately three hours after injury, and a right pneumonectomy was performed.

With light microscopy, one can trace the initial damage to the capillary endothelial cells with cytoplasmic imbibitional edema, which subsequently spreads into the interstitium of the alveolar wall and finally into the alveolar space (Fig 1). Occasional-

1. Light photomicrographs with progressive magnifications (left to right, top to bottom) showing focal interstitial and alveolar edema. The alveolar edema fluid is seen as the amorphous and acellular palely staining material (arrows) partially occluding the alveolar spaces. (Hematoxylin and eosin, X 17-300.)

KEY:

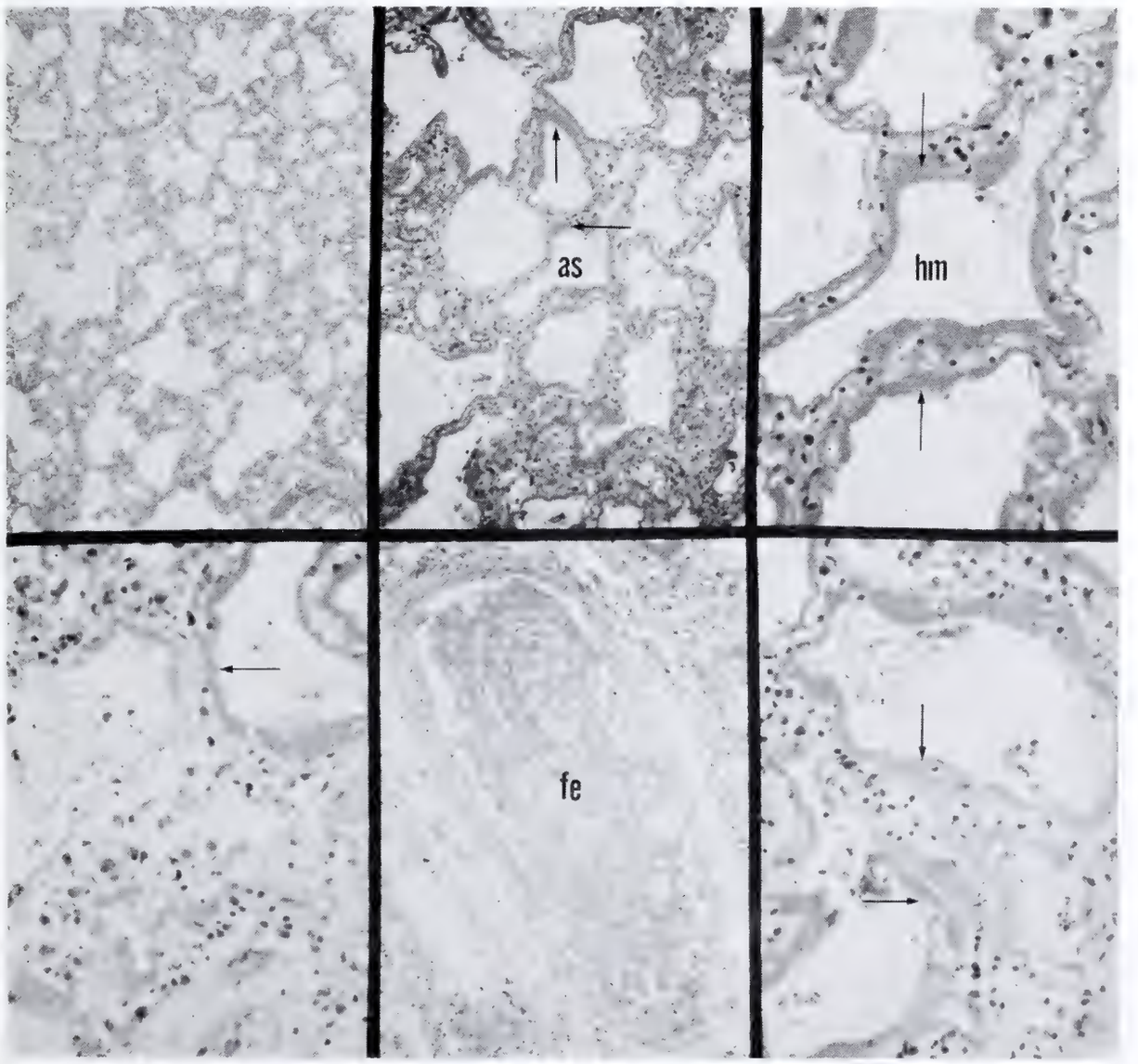
ae–alveolar edema
as–alveolar space
bm–basement membrane
c–collagen
cl–capillary lumen
d–degranulation
E–erythrocyte
el–elastin
En–endothelial cell
f–fibrin
fam–free alveolar macrophage
fe–fibrin embolus
hm–hyaline membrane
ie–interstitial edema
l–lamellar bodies
pd–particulate debris
T_1–Type 1 alveolar epithelial cell
T_2–Type 2 alveolar epithelial cell



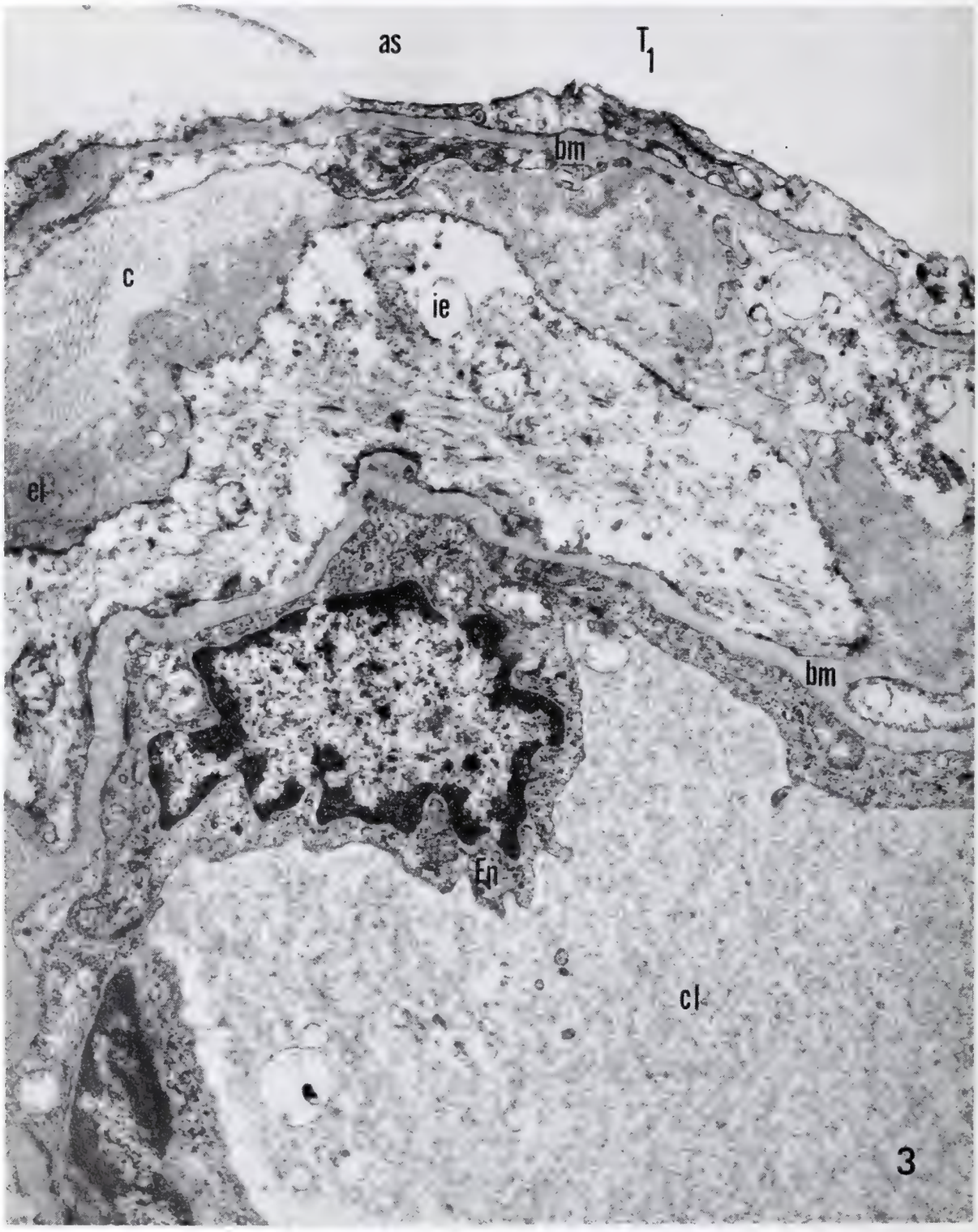
ly, one endothelial cell of a capillary was swollen while the adjacent cells appeared to be uninvolved.

Case 2: A 21-year-old woman presented with massive gastric hemorrhage and hematemesis following acute alcoholism. The patient's blood pressure fell from 140/80 to 80/40 despite transfusion of 6 units of blood, and she was taken to surgery where gastric bleeding sites were sutured. Postoperatively, respiratory failure developed, with an arterial oxygen pressure of 45 mm Hg, carbon dioxide pressure of 51 mm Hg, and pH of 7.35. The patient was treated with tracheostomy, high concentrations of inspired oxygen through a volume ventilator, and positive end-expiratory pressure to 8 cm water. She

2. Light photomicrographs with progressive magnifications. Note the interstitial edema and the dense, compact hyaline membranes (arrows) lining the alveolar ducts and spaces. Also, in the lower center frame, note a fibrin microembolus. (Hematoxylin and eosin, X 17-300.)



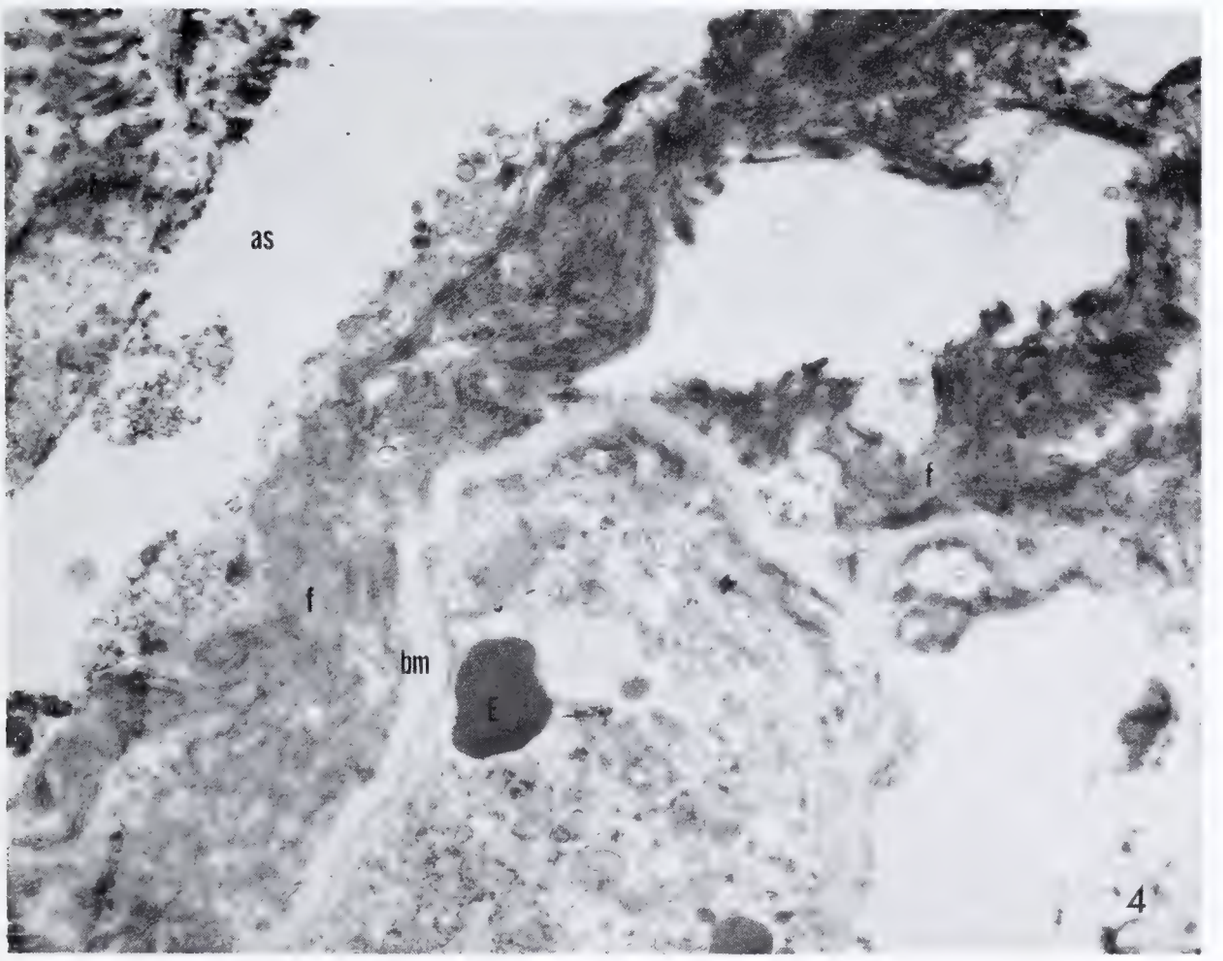
3. Electron micrograph showing interstitial edema within the alveolar wall. This represents the earliest phase of shock lung, and is a reversible phenomenon. (Lead citrate, X 19,875.)



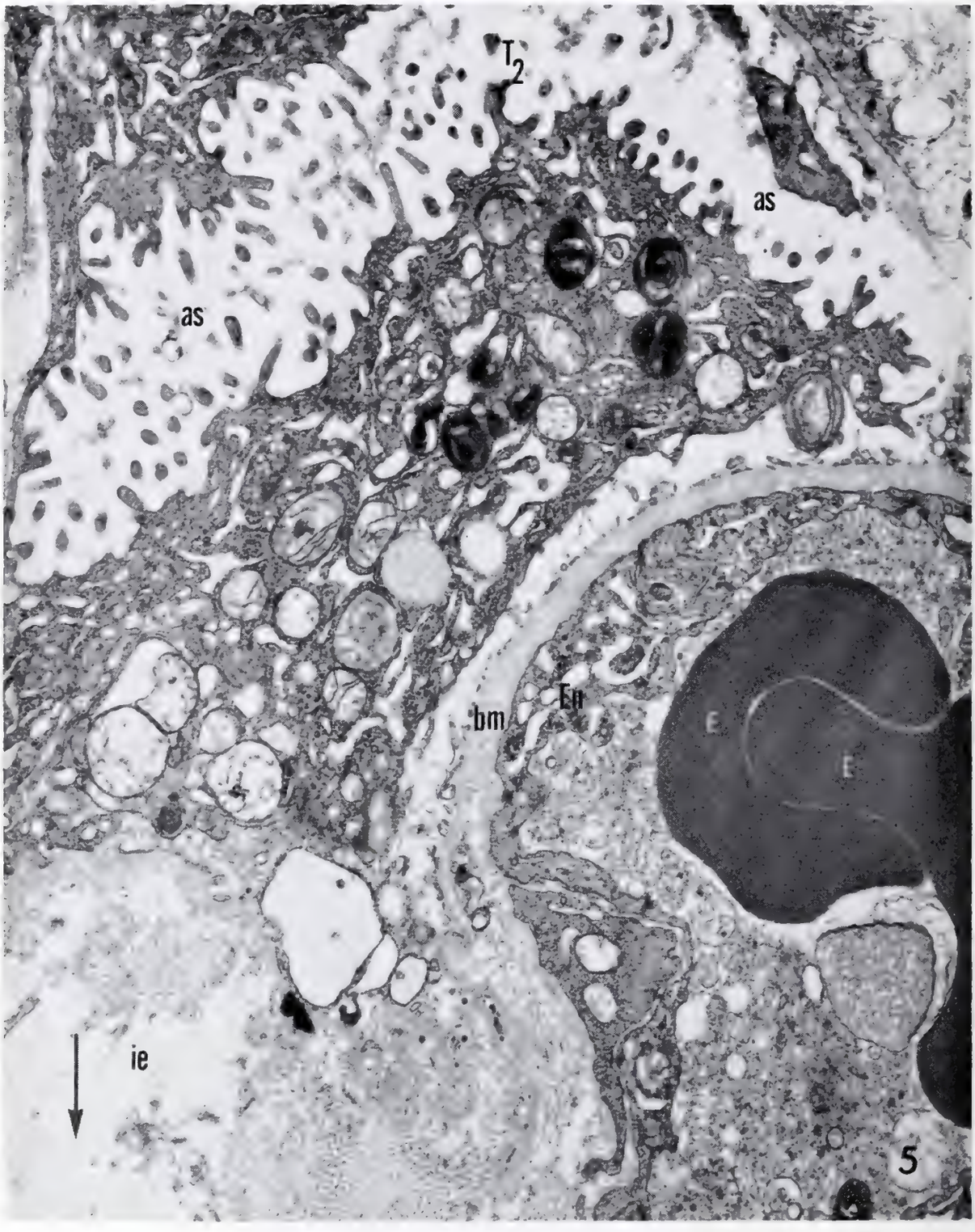
did not respond to these measures and died three days later of respiratory failure and cardiac arrest. At autopsy both lungs together weighed 2,100 gm. With light microscopy, the findings included prominent hyaline membranes lining alveolar ducts and occasional alveoli (Fig 2). There was marked congestion and edema within the alveolar septae, together with a sparse infiltrate of lymphocytes and free alveolar macrophages. Cuboidal metaplasia of alveolar lining cells was also present. Occasional small thromboemboli were found.

With electron microscopy, extensive injury of the alveolar capillaries and severe imbibitional edema of the alveolar wall was noted (Fig 3). Numerous capillary endothelial cells consisted of only cell membranes surrounding a mass of granular, unrecognizable debris (Fig 4). Many of the type I alveolar epithelial cells were lost, others were swollen, and still others were replaced by hyperplastic type II cells(Fig

4. Electron micrograph of the advanced lesion in alveolar wall of the shock lung. The remnants of the alveolar capillary are recognized only by the erythrocyte in the lumen of the capillary. There is distortion and disruption of the capillary and endothelium. The capillary basement membrane is swollen and frayed. The alveolar space is lined by fibrin which forms the hyaline membrane. (Lead citrate, X 24,650.)



5. Electron micrography showing alveolar wall of the shock lung with loss of type I alveolar epithelial cells and hyperplasia of type II alveolar epithelial cells. Note the interstitial edema (arrow) and swollen endoplasmic reticulum of the alveolar capillary endothelial cells. (Lead citrate, X 13,800.)

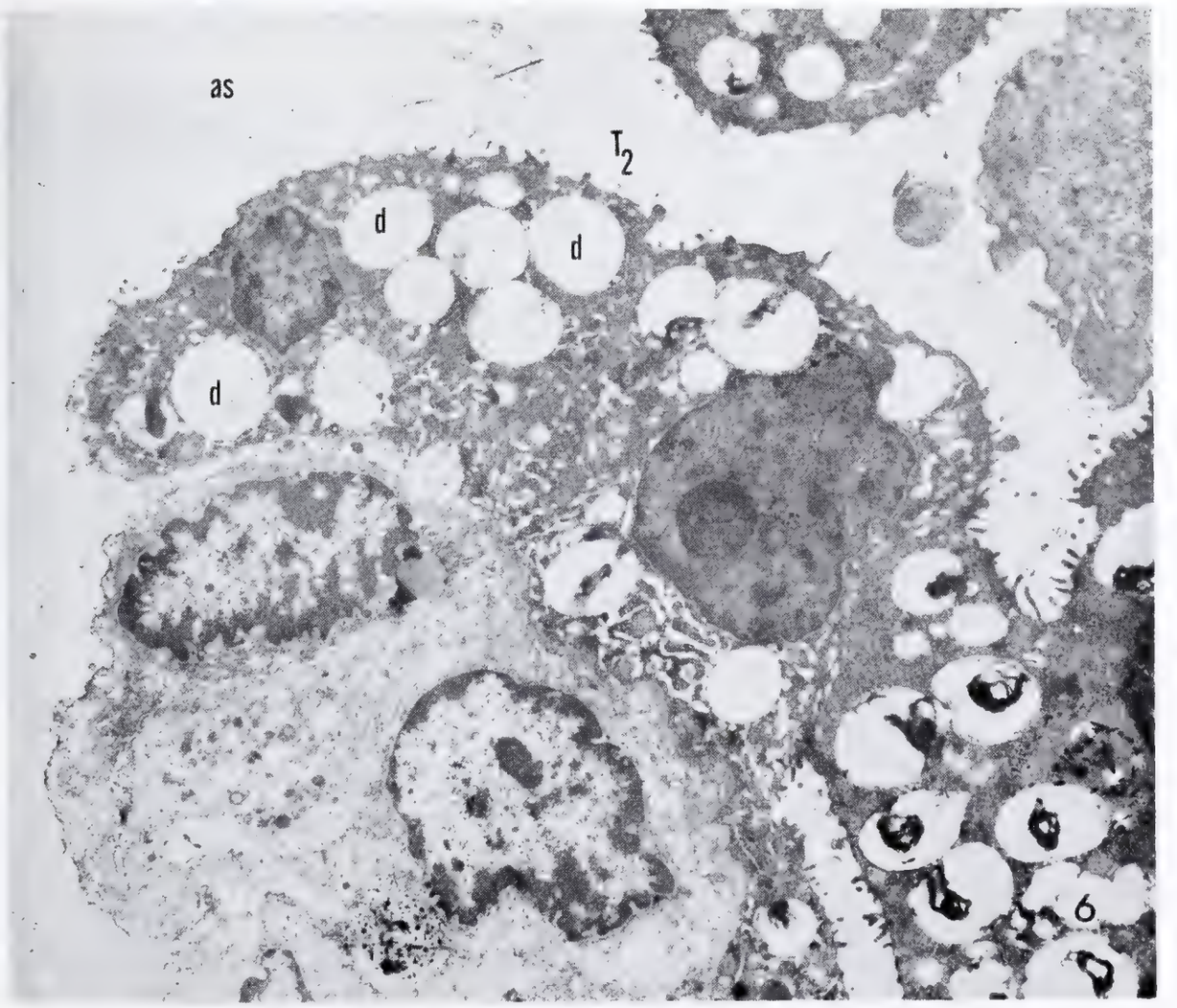


5). Some alveoli had no lining epithelium. Many type II cells were damaged, showing degranulation of their surfactant inclusion bodies and blunting of their microvilli (Fig 6). The alveolar spaces contained a lining of fibrin membranes (hyaline membranes) (Fig 7), proteinaceous debris, erythrocytes, and many free alveolar macrophages (Fig 8). Occasional neutrophilic granulocytes were seen wedged within the alveolar capillaries.

Discussion

Basic to interpreting and understanding electron micrographs of the lung is a working knowledge of the normal untrastructure of the alveolar wall, which is lined by a continuous layer of type I and type II alveolar epithelial cells.[1] The type I alveolar epithelial cell has extremely thin, attenuated cytoplasm largely free of organelles and can be seen only with the electron microscope. It covers more than 80% of the

6. Electron micrography of shock lung showing hyperplastic type II alveolar epithelial cells, one of which has degranulation of its lamellar (surfactant) bodies. (Lead citrate, X 13,000.)



surface area of the alveolar wall. The type II alveolar epithelial cell can be seen with the light microscope, and is a large cell protruding somewhat into the alveolar space and having numerous lamellated surfactant bodies in its cytoplasm. The most numerous cells in the alveolar wall are the capillary endothelial cells. The fourth cell type within the alveolar wall is the interstitial cell. There is some controversy about its function: it may represent either a reticuloendothelial cell migrating from the alveolar capillary into the alveolar space, where it will function as a free alveolar macrophage, or a resting multipotential mesenchymal cell which, upon stimulation, may transform into a smooth muscle cell. Phagocytosis within the lung is carried out by the free alveolar macrophages and not by alveolar epithelial cells.

The initial lesion in the shock lung is damage to the capillary endothelial cell—the shock cell of the lung (Fig 9). Subse-

7. High magnification electron micrograph showing a closer view of a hyaline membrane composed of fibrin and cellular debris. Note free cytoplasmic organelles (arrows) enmeshed within the hyaline membrane. (Lead citrate, X 24,650.)

quent damage to the alveolar capillary wall permits blood plasma to escape into the interstitium of the alveolar wall and finally into the alveolar space. Obviously, electron microscopy is essential to detect the early changes of this disease process.

Acknowledgment

Mrs. Martha G. Nailling assisted in the preparation and typing of this manuscript.

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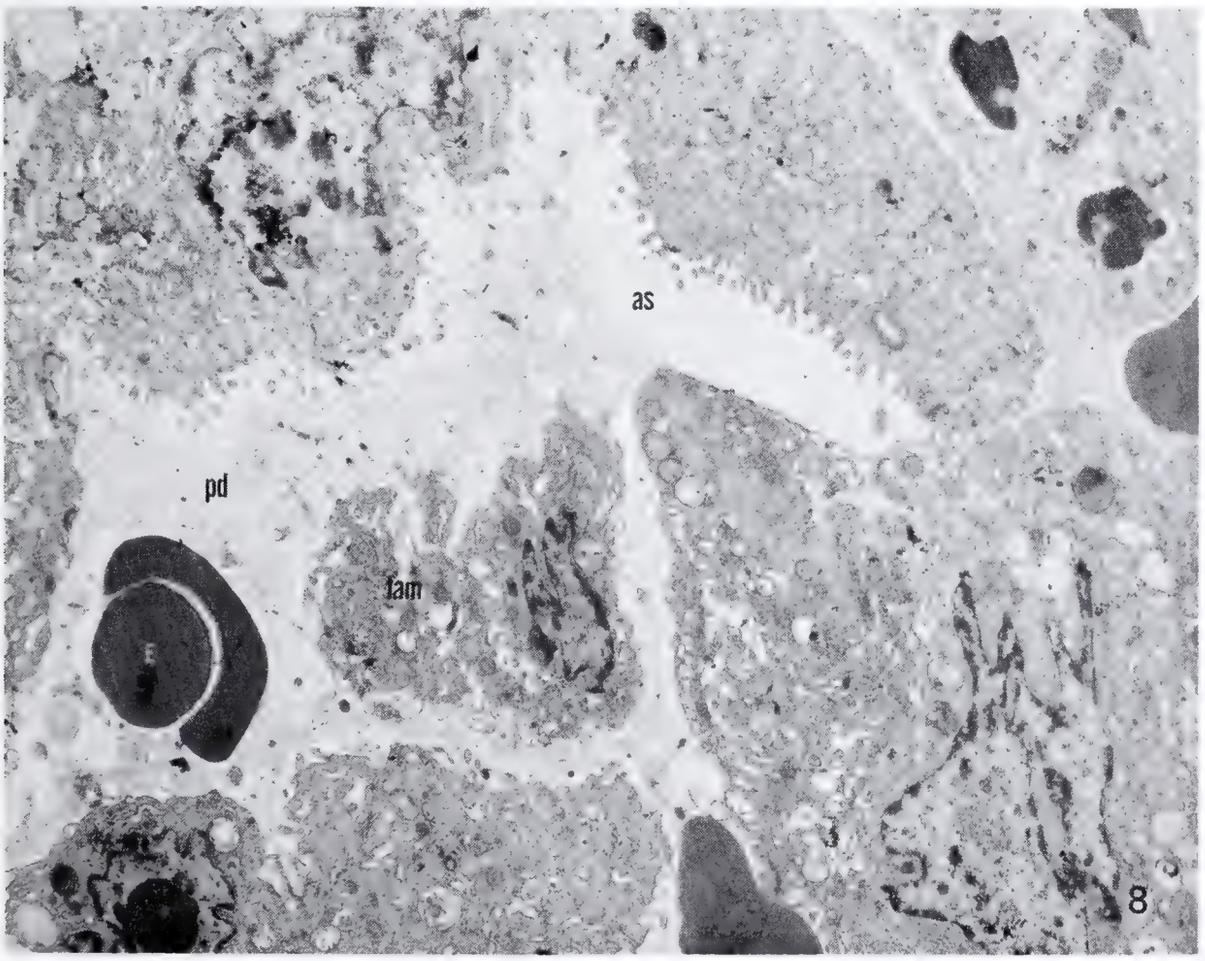
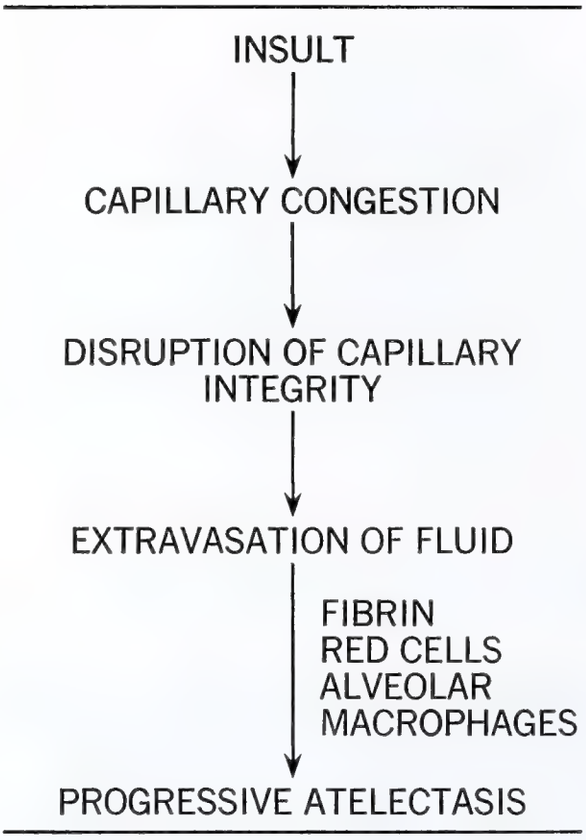
8. Low magnification electron micrograph of alveolus in shock lung. Note the protein, erythrocytes, and macrophages within the alveolar space. Note also the hyperplasia of the lining type II alveolar epithelial cells, as well as the swollen and damaged capillary endothelial cells (Lead citrate, X 4,550.)





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Dr. Greenberg, Department of Pathology, Baylor College of Medicine, Texas Medical Center, Houston, Texas 77025.

Dr. Schweppe, 6720 Bertner, Houston, Texas 77025. Ms. Harness, Department of Pathology, Baylor College of Medicine, Texas Medical Center, Houston, Texas 77025.

Ventricular aneurysm in Chagas' myocardiopathy: clinical, epidemiologic, angiographic features

Alfonso Aldama-Luebbert, MD; Antoine T. Nasrallah, MD; Efrain Garcia, MD; Robert J. Hall, MD

The clinical and angiographic features are described of a case of chagasic myocarditis and ventricular aneurysms. We believe it to be the first reported occurrence of Chagas' disease in Guyana (formerly British Guiana), one of the three areas in South America where no human infection has been reported previously. Awareness of this disease and its clinical manifestations is important in light of the current extent of air travel and increasing social contact among different continents. The varied clinical expressions as well as the epidemiologic and pathologic features are briefly reviewed.

Chagas' heart disease, at one time believed to be geographically confined mainly to South America, has begun to appear in the Western Hemisphere as far north as the United States. Small mammals infected with a protozoan parasite, *Trypanosoma cruzi*, have been found in Alabama, Arizona, California, Florida, Georgia, Louisiana, Maryland, New Mexico, Texas, and Utah.[1] Infections in two humans were reported in Texas.[1] With the ever-increasing mobility of individuals in our present society, an awareness of this disease and its clinical expressions is important.

The purpose of this report is to describe the clinical, hemodynamic, and angiographic features of a woman from British Guiana with chagasic myocarditis with ventricular aneurysms, and to give a brief review of the varied clinical manifestations and pathologic features of Chagas' disease.

Case Report

A 37-year-old woman from Bogota, Colombia, had dyspnea upon exertion for five months before admission to the Texas Heart Institute. Previously she had been in good health. A roentgenogram of the chest taken in Colombia during a routine physical examination for complaints of epigastric pain and fatigue demonstrated changes suggestive of a left ventricular aneurysm. Results of electrocardiography were reported to be normal, and a Chagas' complement fixation test result was positive. During the ensuing five months she developed dyspnea upon climbing one flight of stairs or walking three to four blocks, and palpitations of increasing frequency unrelated to any precipitating factors. No other cardiovascular symptoms were noted. Review of the family history revealed no heart disease, hypertension, or diabetes.

Social background of the patient revealed her to be a gravida 9, para 5, having had four spontaneous abortions all occurring in the first trimester. She was born in British Guiana where she resided for her first 25 years. She subsequently lived in Trinidad for eight years, Puerto Rico for four years, and finally, Bogota, Colombia, where she was living during the immediate five months preceding transfer to our institution for evaluation.

Physical examination upon admission to the Texas Heart Institute revealed a blood pressure of 104/60 mm Hg and a heart rate of 80/minute with four to eight premature beats per minute. Examination of the cardiovascular system disclosed no signs of congestive heart failure. The apical impulse, located in the sixth intercostal space, 1 cm lateral to the left midclavicular line, was normal. Heart sounds were normal, and no murmurs or extradiastolic sounds were audible.

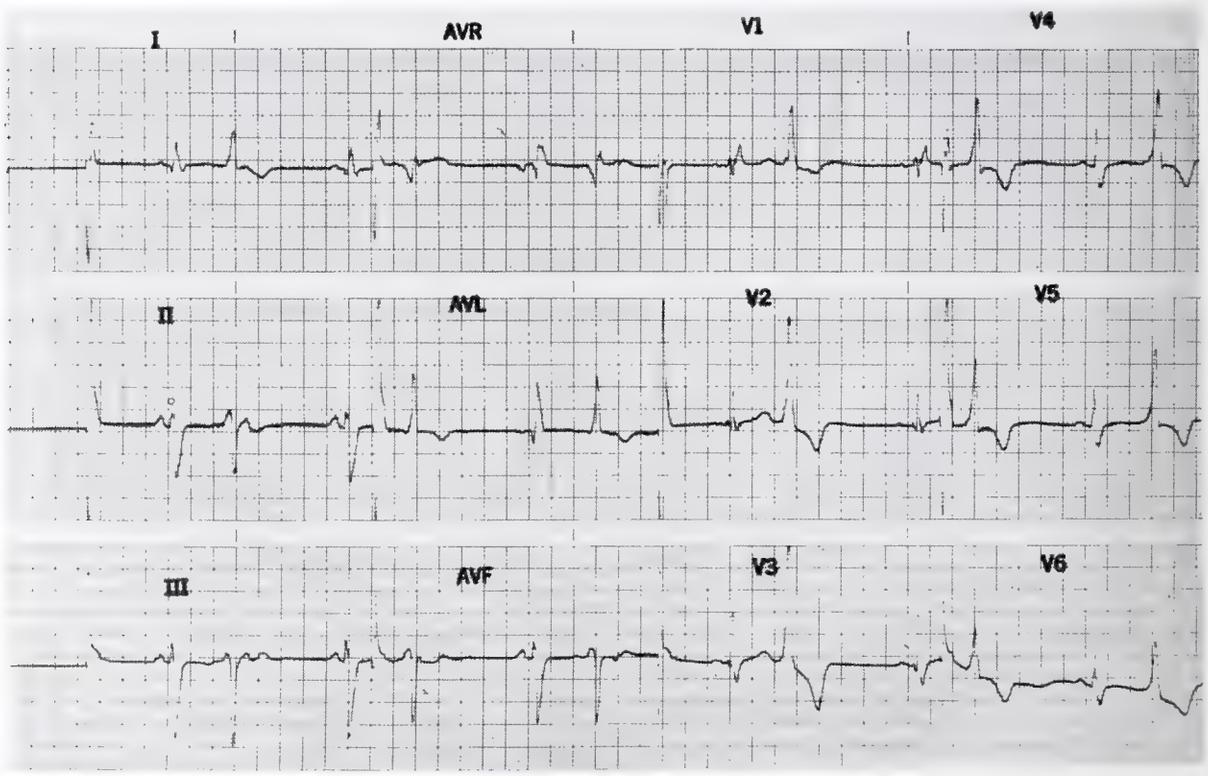
From the Division of Cardiology of the Texas Heart Institute of St. Luke's Episcopal and Texas Children's Hospitals, Houston, Texas.

Laboratory studies consisting of hemogram, sedimentation rate, urinalysis, SMA 12,* and VDRL were all within normal limits. Peripheral blood smears for parasites and a complement fixation test for *T cruzi* were negative. An ECG showed premature ventricular beats in bigeminy, right bundle-branch block, and left anterior hemiblock (Fig 1). Results of an esophagogram, upper gastrointestinal series, and barium enema examination were normal. Right and left cardiac catheterization disclosed normal hemodynamics and normal coronary arteriograms. The left ventricular angiogram showed two prominent aneurysmal dilatations in the lateral border and one barely visible at the apex of the heart (Fig 2). These aneurysmal dilatations produced discrete convexity of the myocardial wall during systole and were barely seen during diastole. The hospital course of this patient consisted mainly of a diagnostic work-up, and at the time of discharge the premature beats were abolished with quinidine.

Chronic chagasic myocardiopathy was considered to be the most plausible diagnosis based upon the clinical, cardiographic, and angiographic findings of primary myocardial involvement. In addition, other causes of heart disease, for example, congenital, atherosclerotic, rheumatic, familial, or obstructive heart disease, were excluded.

*Sequential multiple analysis: Calcium, inorganic phosphatase, glucose, total protein, albumin, total bilirubin, alkaline phosphatase, lactic dehydrogenase, serum glutamic oxalacetic transaminase, blood urea nitrogen, uric acid, and cholesterol.

1. Electrocardiogram revealing premature beats in bigeminy, right bundle-branch block and left anterior hemiblock.



Discussion

Although Chagas' disease is endemic in South America, it is of interest that reports of human infections of *T cruzi* have not yet emanated from Guyana or Surinam (formerly Dutch Guiana) or Honduras. This case of chronic chagasic myocarditis introduces two possibilities: (1) the patient contracted the initial infection *in* Guyana, or (2) she contracted it after age 25. Distribution of age in 171 patients with acute Chagas' disease reported by Laranja and coworkers showed that approximately 95% of their patients were younger than age 20, which makes the latter possibility highly unusual.[1] The clinical, angiographic, and electrocardiographic picture of our patient was most compatible with chronic chagasic myocarditis, that is, cardiac dilatations, arrhythmias, right bundle-branch block, left anterior hemiblock, frequent and multiform ventricular extrasystoles, and, significantly, the absence of any other cause of heart disease.[1-3]

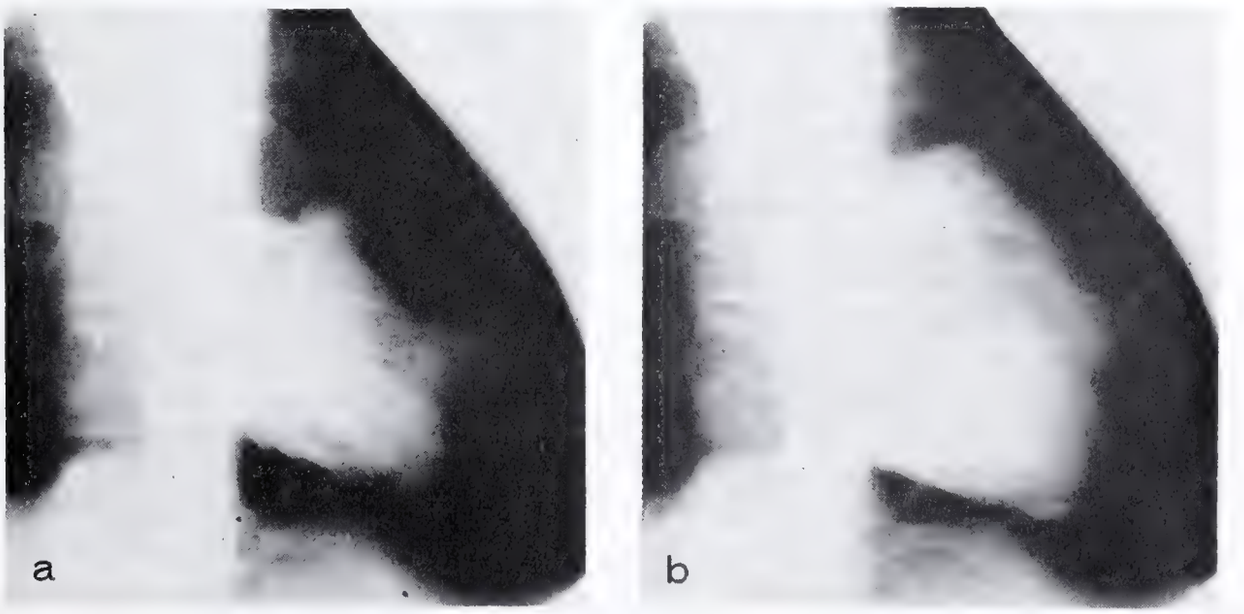
T cruzi, the infectious agent of Chagas disease, has as its reservoirs infected humans and animals such as the dog, cat, pig, and others.[4] Transmission of the disease is by feces from infected vectors—the blood-sucking species of cone-nosed bugs; but it can also be transmitted by transfusion of blood.[4]

The acute form of Chagas' disease usually occurs in children and is manifested by general malaise, fever, anorexia, muscular pains, and sometimes vomiting, diarrhea, and hepatosplenomegaly.[1] Painless and unilateral palpebral edema and conjunctivitis, known as Romana's sign, may occur during the first febrile week because of the inoculation of the *T cruzi* at the outer canthus of the eye as the portal of entry.[1,2,4,7]

Cardiovascular Involvement

Cardiovascular manifestations of the acute disease are usually mild and in-

2. Left ventricular angiogram in right anterior oblique projection. Aneurysmal dilatations are evident in (a) end-systole, and faintly seen in (b) end-diastole.



clude, most commonly, reversible cardiac enlargement and some minor transitory changes of the T-waves on the ECG. There is, however, a wide spectrum that encompasses virtually asymptomatic patients as well as those with a severe fulminating form of the disease. In an analysis of 180 cases of acute infection, Laranja and associates[1] found the most common electrocardiographic changes to be prolongation of the PR interval, primary T-wave changes, low voltage of the QRS, prolongation of the Q-T interval, and ST-T changes ("injury-ischemia pattern"). The chief anatomical correlation was severe diffuse myocarditis with slight degenerative changes in the myocardial fibers and with leishmanial forms of *T cruzi* in some of these fibers.[1]

In symptomatic patients the acute manifestations of Chagas' disease subside within a few months, and the patient enters an asymptomatic period of 10 to 20 years after which time the late manifestations of the disease become apparent.[1] The chronic manifestations of Chagas' disease are restricted mainly to the cardiovascular, gastrointestinal, and nervous system.

The cardiovascular manifestations consist of characteristic pathological, clinical, and electrocardiographic changes. The typical pathological changes include diffuse myocarditis with areas of myocardial fibrosis[2] along with some areas of severe degenerative changes involving hyaline degeneration, myocytolysis, disappearance of striations, and fiber fragmentations.[2] The pathogenetic mechanisms for these changes have been considered by different authors and include direct damage by the *T cruzi*, a toxic effect of the *T cruzi* on the myocardium, and an immunoallergic mechanism that is set off by the disintegration of the myocardial fibers. The components of these fibers act like antigens to elicit the formation of cytotoxic antibodies against these fibers and give rise to foci of damage and reparative fibrosis.[2] In some of these areas of necrosis, thinning and atrophy of the myocardial wall often results in the formation of a ventricular aneurysm occurring most frequently at the apex.[1,2] Our patient had one such aneurysm and two other aneurysms along the lateral wall of the heart. Mural thrombi are not uncommon and give rise to embolic phenomena and death from cerebral emboli. In a recent study, Anselmi[3] demonstrated the formation of aneurysms in the free walls of the heart in puppies that were experimentally infected with *T cruzi*. Degeneration of the cardiac autonomic ganglia as well as degeneration of other cardiac nerves and parts of the conduction system also have been demonstrated pathologically.[8]

Clinical Features

The clinical features of chagasic myocarditis consist mainly of congestive heart failure and rhythm disturbances. Physical examination may reveal a muffled first heart sound at the mitral area, a systolic murmur secondary to mitral or tricuspid regurgitation, fixed splitting of the second heart sound due to right bundle-branch block, and increased systemic venous pressure and hepatomegaly.[1] Progression of the disease is slow, with some patients surviving for long periods until cardiac insufficiency ultimately becomes irreversible.

The electrocardiographic changes associated with chronic Chagas' disease are unique and have been studied extensively

by Rosenbaum and coworkers.[2,9] The most typical electrocardiographic findings have been right bundle-branch block, left anterior hemiblock, ischemic T-wave changes, and frequent multiform ventricular extrasystoles which often give rise to bigeminal rhythm.[2,9] Similar findings were noted in our patient and are believed to be characteristic of Chagas' disease. These findings of arrhythmias and bundle-branch block in Chagas' disease were confirmed by Pinto-Lima and collaborators[10] who analyzed the electrocardiographic and vectorcardiographic findings in 124 tracings from 103 autopsied cases. Findings by Laranja's group were similar in a study of 683 patients from Bambuí, Brazil.[1]

Gastrointestinal Tract

Involvement of the gastrointestinal tract in patients with Chagas' disease is believed to result mainly from damage to the parasympathetic innervation of the hollow organs, with subsequent dilatation of these organs producing megacolon, megaesophagus, and dilatation of the small bowel and some of the salivary glands.[6] In endemic areas as many as 97% of patients with megaesophagus have shown positive complement fixation test results for Chagas' disease and electrocardiographic changes characteristic of chronic chagasic cardiomyopathy.[1]

Nervous System

All parts of the nervous system may be affected by Chagas' disease and the pathogenetic mechanisms are the same three mechanisms described in the genesis of the myocardial lesions, that is, local action of the parasite, toxic products of the parasite destruction, or immunoallergic mechanisms.[5]

Involvement of the central nervous system in the acute form of the disease has been described as a meningoencephalitis, seen almost exclusively in infants less than six months of age.[7] Study of the chronic damage to the CNS in patients with this disease has demonstrated a reduction of the neural population in different portions of the CNS.[5]

The diagnosis of Chagas' disease can be established with a high degree of confidence by different methods. Clinical assessment of typical signs and symptoms in an area endemic for Chagas' disease can establish the basis for suspicion of the disease. The characteristic electrocardiographic findings of the disease are diagnostic of chronic chagasic myocardiopathy in the absence of other causes of heart disease.[2] Laboratory diagnosis of acute Chagas' disease can be ascertained by demonstration of the trypanosomes in the blood by direct examination, culture, or xenodiagnosis,[4] or animal inoculation. Chronic disease can best be diagnosed by the complement fixation test of Machando-Guerreiro which is positive in approximately 90% of the chronic cases and has less than 1% false-positive results.[2]

A knowledge of Chagas' disease is becoming increasingly relevant and important for inhabitants of North America. Although only a few cases of Chagas' myocarditis have been found in North America, current air travel may easily allow entrance of patients from South America in whom chronic Chagas' disease must be suspected. These patients should undergo an ECG to exclude asymptomatic cases. If the diagnosis is still questionable, results of a complement fixation study would be helpful toward affirming a decision. Car-

diac catheterization and angiographic studies are useful in establishing the diagnosis and in excluding other etiologies of heart disease.

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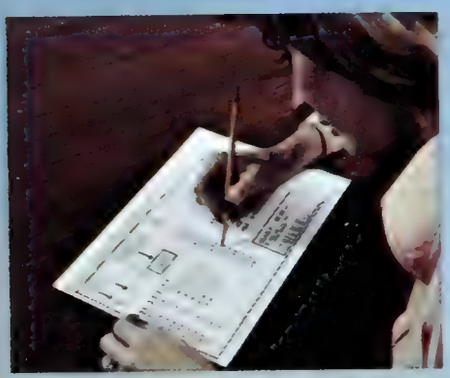
(Please refer to the following page for bioavailability studies and prescribing information.)



Patients with severe pollen allergies were tested during hay fever season in a countryside environment and asked to rate severity of five different symptoms on a scale of 1 to 4.

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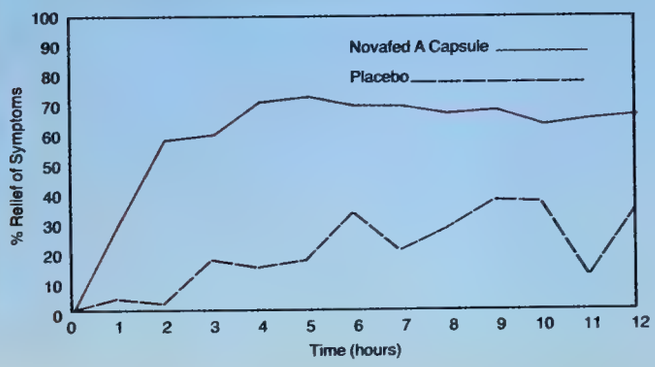

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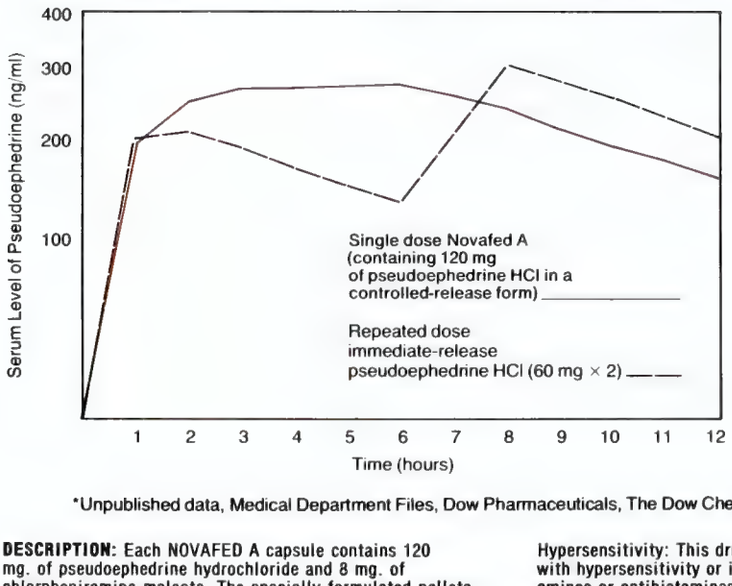
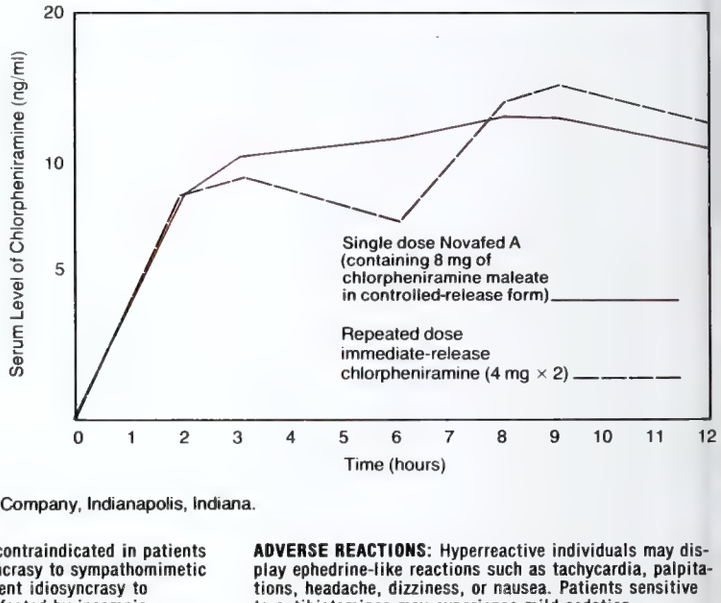
Comparison of Mean Serum Levels of Pseudoephedrine Following Novafed A and an Immediate-Release Reference Formulation*



Comparison of Mean Serum Levels of Chlorpheniramine Following Novafed A and an Immediate-Release Reference Formulation*



*Unpublished data, Medical Department Files, Dow Pharmaceuticals, The Dow Chemical Company, Indianapolis, Indiana.

DESCRIPTION: Each NOVAFED A capsule contains 120 mg. of pseudoephedrine hydrochloride and 8 mg. of chlorpheniramine maleate. The specially formulated pellets in each capsule are designed to provide continuous therapeutic effect for about 12 hours. Nearly one-half of the active ingredients is released soon after administration and the remainder is released slowly over the remaining time period.

ACTIONS: NOVAFED A combines the action of a nasal decongestant, pseudoephedrine hydrochloride, and an antihistamine, chlorpheniramine maleate. These ingredients are combined to provide prompt and sustained nasal and upper respiratory decongestant and antihistaminic action.

INDICATIONS: NOVAFED A is indicated for the relief of nasal congestion and eustachian tube congestion associated with the common cold, sinusitis and acute upper respiratory infections. It is also indicated for perennial and seasonal allergic rhinitis, vasomotor rhinitis, allergic conjunctivitis due to inhalant allergens and foods and for mild, uncomplicated allergic skin manifestations of urticaria and angioedema. Decongestants in combination with antihistamines have been used for many years to relieve eustachian tube congestion associated with acute eustachian salpingitis, aerotitis media, acute otitis media and serous otitis media. NOVAFED A may be given concurrently, when indicated, with analgesics and antibiotics.

CONTRAINDICATIONS: Symphathomimetic amines are contraindicated in patients with severe hypertension, severe coronary artery disease, and in patients on MAO inhibitor therapy. Antihistamines are contraindicated in patients with narrow-angle glaucoma, urinary retention, peptic ulcer, during an asthmatic attack, and in patients receiving MAO inhibitors.

Children under 12: NOVAFED A controlled-release capsules should not be used in children less than 12 years of age.

Nursing Mothers: Pseudoephedrine is contraindicated in nursing mothers because of the higher than usual risk for infants from sympathomimetic amines.

Hypersensitivity: This drug is contraindicated in patients with hypersensitivity or idiosyncrasy to sympathomimetic amines or antihistamines. Patient idiosyncrasy to adrenergic agents may be manifested by insomnia, dizziness, weakness, tremor or arrhythmias.

WARNINGS: Sympathomimetic amines should be used judiciously and sparingly in patients with hypertension, diabetes mellitus, ischemic heart disease, increased intraocular pressure, hyperthyroidism, or prostatic hypertrophy. Sympathomimetics may produce central nervous system stimulation and convulsions or cardiovascular collapse with accompanying hypotension.

Antihistamines may impair mental and physical abilities required for the performance of potentially hazardous tasks, such as driving a vehicle or operating machinery, and mental alertness in children. Chlorpheniramine maleate has an atropine-like action and should be used with caution in patients with increased intraocular pressure, hyperthyroidism, cardiovascular disease, hypertension or in patients with a history of bronchial asthma.

Do not exceed recommended dosage.

Use in Pregnancy: The safety of pseudoephedrine for use during pregnancy has not been established.

Use in Elderly: The elderly (60 years and older) are more likely to have adverse reaction to sympathomimetics. Overdosage of sympathomimetics in this age group may cause hallucinations, convulsions, CNS depression, and death. Therefore, safe use of a short-acting sympathomimetic should be demonstrated in the individual elderly patient before considering the use of a sustained-action formulation.

PRECAUTIONS: This drug should be used with caution in patients with diabetes, hypertension, cardiovascular disease and hyperreactivity to ephedrine. The antihistaminic may cause drowsiness and ambulatory patients who operate machinery or motor vehicles should be cautioned accordingly.

ADVERSE REACTIONS: Hyperreactive individuals may display ephedrine-like reactions such as tachycardia, palpitations, headache, dizziness, or nausea. Patients sensitive to antihistamines may experience mild sedation.

Sympathomimetic drugs have been associated with certain untoward reactions including fear, anxiety, tenseness, restlessness, tremor, weakness, pallor, respiratory difficulty, dysuria, insomnia, hallucinations, convulsions, CNS depression, arrhythmias, and cardiovascular collapse with hypotension.

Possible side effects of antihistamines are drowsiness, restlessness, dizziness, weakness, dry mouth, anorexia, nausea, headache and nervousness, blurring of vision, heartburn, dysuria and very rarely, dermatitis.

DRUG INTERACTIONS: MAO inhibitors and beta adrenergic blockers increase the effect of sympathomimetics. Sympathomimetics may reduce the antihypertensive effects of methyldopa, mecamylamine, reserpine and veratrum alkaloids. Concomitant use of antihistamines with alcohol, tricyclic antidepressants, barbiturates and other central nervous system depressants may have an additive effect.

DOSAGE AND ADMINISTRATION: One capsule every 12 hours. Do not give to children under 12 years of age.

CAUTION: Federal law prohibits dispensing without prescription.

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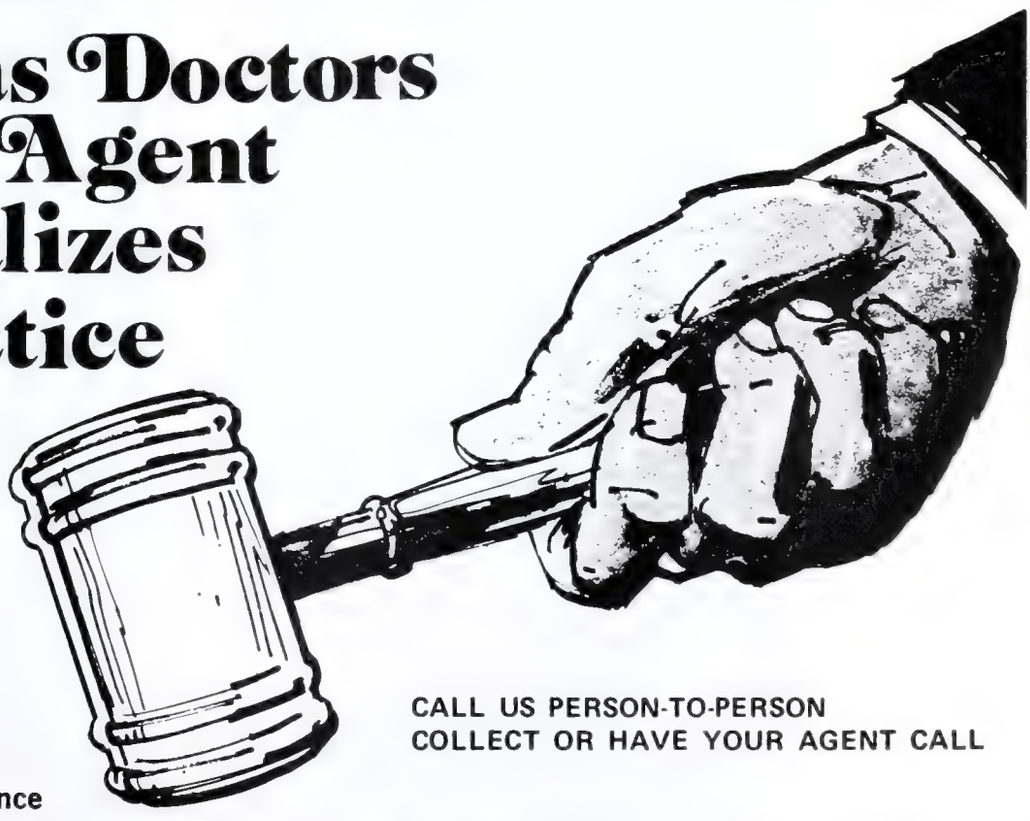

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Modern laboratory diagnosis of thyroid disease

C. E. Menendez, MD; J. W. Goldzieher, MD

Recent advances in thyroid function testing have made possible a better understanding of normal and pathological thyroid states. However, they have also produced a large and confusing nomenclature. This review is intended to help clarify the situation and facilitate the diagnosis of thyroid disease.

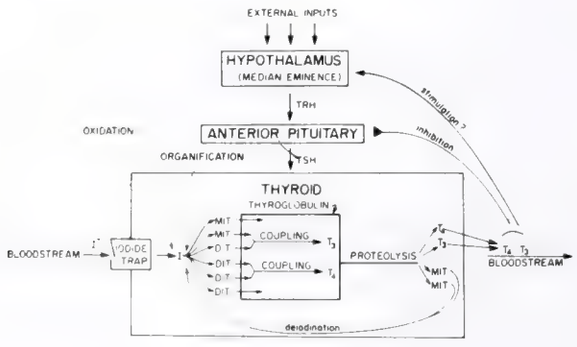
Basic Thyroid Physiology

Pituitary thyrotrophin (TSH) stimulates the thyroid gland to trap inorganic iodide against a concentration gradient (Fig 1). Once within the gland (and still under the control of TSH), the iodide is oxidized to iodine and bound to tyrosine molecules to form monoiodotyrosine (MIT) and diiodotyrosine (DIT). MIT and DIT are chemically coupled within the follicular thyroglobulin to form tetraiodothyronine (thyroxin, T_4) and triiodothyronine (T_3). Later, through the proteolysis of thyroglobulin, T_3 and T_4 are released into the circulation. Once in the circulation they become bound, to a greater or lesser extent, to plasma proteins (Fig 2). The unbound or free portion of the circulating thyroid hormones is the metabolically active fraction. It is these free hormones that exert a negative feedback effect on the anterior pituitary and inhibit the release of TSH (Fig 1). In the plasma, 60-85% of T_4 is bound to a globulin (thyroxin-binding globulin, TBG), 15-30% is bound to thyroxin-binding prealbumin (TBPA), and almost all the rest is bound loosely to albumin. The free T_4 represents only about 0.018 to 0.064% of the total amount of the T_4 in the plasma. The bound and free T_4 are in dynamic equilibrium in the plasma (Fig 2). About 65-85% of T_3 is bound to TBG, and nearly all the remainder to albumin. Free T_3 constitutes about 0.3% of the total plasma T_3—a much larger proportion (nearly tenfold) than of T_4, reflecting the looser binding of T_3 to plasma proteins. The total plasma concentration of T_3 (100-200 ng/dl) is much lower than that of T_4 (about 4-12 μg/dl or 4,000-12,000 ng/dl), but its metabolic contribution is greater than this would indicate. This is because it is two to three times more potent than T_4. Conversion of T_4 to T_3 by peripheral tissues appears to be the major source of T_3, accounting for about 80% of the production rate of T_3 under normal circumstances. At the present time, both T_3 and T_4 are thought to have biological activity.

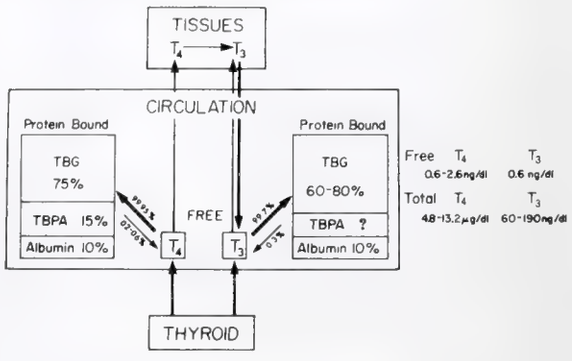
Thyroid Function Tests

In order to examine the intricacies of thyroid function it is necessary to understand the information provided by, and the lim-

1. Thyroid homeostasis.



2. Transport of thyroid hormones.



itations of, thyroid function tests. In the past few years there has been a revolutionary change in this field which has made many classical methods obsolete and has also generated a bewildering variety of tests and nomenclature. We will use the nomenclature recommended by the American Thyroid Association.

A. Tests Which Measure Circulating T_4:

1. PBI: The determination of protein-bound iodine as a measure of circulating T_4 has been abandoned. In special circumstances, such as subacute or chronic thyroiditis, a large difference between PBI and a more specific test (for example, T_4-RIA) will indicate presence of nonhormonal endogenous iodinated proteins and peptides, such as thyroglobulin. The accuracy of the PBI test was limited by the many exogenous substances that interfered with the determination (for example, inorganic and organic iodides).

2. Butanol Extractable Iodine (BEI): This test also has been abandoned.

3. Thyroxin Concentration by Chromatography (T_4 by Column): This test expresses thyroxin as T_4 iodine. It temporarily replaced the PBI and the BEI and has, in turn, been superseded by the determination of thyroxin by displacement (T_4D, Murphy-Pattee) or by radioimmunoassay (T_4-RIA).

4. Thyroxin Concentration by Displacement (T_4D) and by Radioimmunoassay (T_4-RIA): These two techniques are presently used by most laboratories for the determination of total circulating T_4. The former is also called T_4 by competitive protein binding (T_4-CPB) or T_4 (Murphy-Pattee). The T_4D utilizes the displacement of radioactive T_4 from TBG by endogenous T_4 to determine its concentration in the plasma, and the T_4-RIA utilizes the displacement of radioactive T_4 from a specific antibody instead of from TBG.

T_4D and T_4-RIA are the determinations of choice for measuring total circulating T_4 at the present time. They are rarely affected by contaminants and are sensitive, accurate, and rapidly performed.

As in any determination of total circulating T_4, the total concentration of T_4 depends on the amount of circulating T_4-binding proteins. Thyroxin-binding proteins are elevated by pregnancy, oral contraceptives and estrogens, and by certain other conditions. In these situations, the total circulating T_4 is elevated without causing hyperthyroidism. Contrariwise, the total circulating T_4 may be misleadingly reduced in cirrhosis, nephrotic syndrome, congenital deficiency of TBG, and during treatment with Dilantin, high dosage salicylates, or androgens (Fig 3). Obviously, the level of *free* thyroxine (FT_4) is the item of clinical interest. This is technically difficult to measure directly, and indirect approaches are usually required. These are described subsequently.

5. Resin Triiodothyronine Uptake (RT_3U): This is the so-called T_3 test which is primarily a measure of T_4-binding capacity of the plasma and does not measure the concentration of T_3 at all. The mechanism of the test is illustrated in Fig 4. Radioactive T_3 (T_4 could also be used) is added to plasma to occupy the unused capacity of the plasma thyroxin-binding proteins. The remaining unbound radioactivity is adsorbed by a resin or similar material. Obviously, the less radioactivity bound to the patient's serum proteins, the greater the resin uptake. (For convenience, the radioactivity associated with the resin is counted.) The binding of the radioactive hormone to serum proteins depends both on the avidity and on the quantity of the bind-

ing protein. Thus, the amount left over for the resin to bind can be increased by hyperthyroidism or by a decrease in the absolute amount of thyroxin-binding proteins (cirrhosis, nephrotic syndrome, etc) (Fig 4). The RT_3U is useful because it corrects the total T_4 measurement for changes due to increased protein binding (that is, estrogens, pregnancy, birth control pills, and other less common situations), or decreased protein binding (that is, liver disease, salicylates, Dilantin, androgen therapy, nephrotic syndrome, congenital deficiency of TBG). Since the RT_3U changes in reverse direction to the amount of binding, a combination of a measurement of total T_4 and RT_3U can be used to approximate the free thyroxin concentration. The latter is of great clinical importance, since the free T_4 is the metabolically active fraction and shows the closest correlation with the thyroid status of the individual.

6. Free Thyroxin Concentration (FT_4): The actual free thyroxin concentration is measured by equilibrium dialysis, a laborious and fairly difficult determination that is performed by only a few specialized laboratories. In certain uncommon thyroid diagnostic problems, it may be necessary to measure FT_4 directly. In severe systemic disease, a modest elevation of FT_4 and the T_4-RT_3 index may be seen.

7. The Thyroxine-Resin T_3 Index (T_4-RT_3 Index): This is also known as the "free thyroxine index" (FTI) or the "corrected thyroxine concentration." The T_4-RT_3 index is

3. Summary of thyroid tests in various clinical conditions.

	T_4D or T_4-RIA	RT_3U	T_4-RT_3 Index	T_3-RIA	TSH	24-hr ^{131}I uptake
Increased binding states (estrogens, pregnancy, oral contraceptives)	↑	↓	N	↑	N	N (avoid test in pregnancy)
Decreased binding states (cirrhosis, nephrotic syndrome, drugs, TGB deficiency)	↓	↑	N	↓	N	N
Thyrotoxicosis	↑	↑	↑	↑	N↓	↑ diffuse or localized
"T_3-thyrotoxicosis"	N	N	N	↑	N↓	N↑
I° Hypothyroidism	↓	↓	↓	N↓	↑	↓
Hypothyroidism secondary to pituitary or hypothalamic disease	↓	↓	↓	↓	↓	↓
Subacute thyroiditis (de Quervain's)	↑N↓	↑N↓	↑N↓	↑N↓	N↑	↓ (will be N or ↑ in recovery phase
Chronic thyroiditis (Hashimoto's)	↓N	↓N	↓N	↓N	N↑	↑N↓
Treatment with T_4	N↑	N↑	N↑	↓N	N↓	↓
Treatment with T_3	↓	↓	↓	N↑	N↓	↓
Treatment with $T_4 + T_3$ or desiccated thyroid	N↓	N	N	N	N↓	↓

a useful and sensitive approximation of the concentration of free T_4. The total T_4 concentration (T_4D or T_4-RIA) is multiplied by a ratio obtained by dividing the patient's RT_3U (expressed as a percentage) by the normal mean RT_3U value of that laboratory. This closely reflects the free T_4 concentration and is calculated automatically in many laboratories and reported when the T_4 test and the "T_3 resin" tests are ordered.

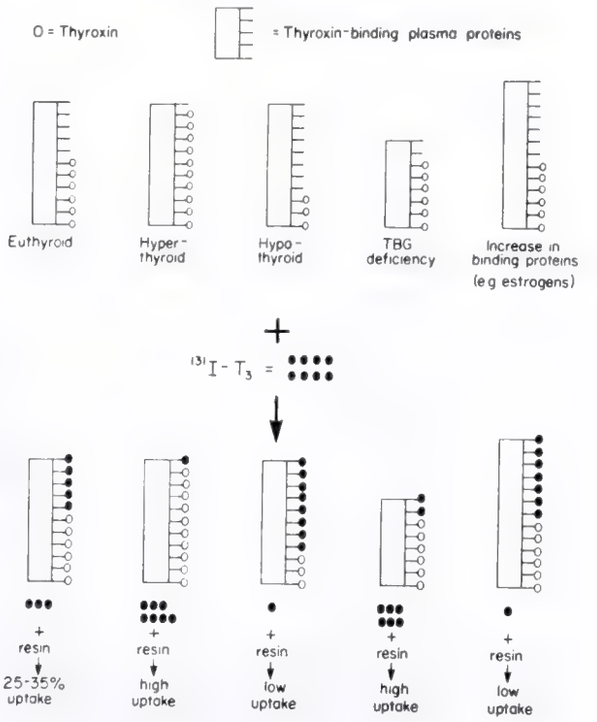
8. The Effective Thyroxin Ratio (ETR): This is a recently developed index which attempts to obtain the same information as the T_4-RT_3 index. It normalizes the values in pregnant or estrogen-treated women, but is relatively unreliable for the diagnosis of hypothyroidism or hyperthyroidism.

B. Tests which Measure Circulating T_3: Triiodothyronine by Radioimmunoassay (T_3-RIA): Triiodothyronine by radioimmunoassay has recently become available commercially. It measures the total amount of circulating T_3. This test has little value in diagnosing hypothyroid states, but it is a useful assay when a patient seems to be hyperthyroid on clinical grounds and yet has persistently normal determinations of total and free T_4. A minority of patients with hyperthyroidism will show elevations in T_3-RIA concentration with normal T_4 concentration and often with normal ^{131}I uptake, although it is usual for both hormones to be elevated in this disease. This so-called T_3-thyrotoxicosis is now a recognized syndrome. There may be a disproportionately low T_4 value with normal or slightly elevated T_3 levels in ^{131}I-treated hyperthyroid patients, and in certain other clinical situations such as incipient hypothyroid states. In the latter, the measurement of TSH as an indicator of possible hypothyroidism is probably more valuable. Measurement of the *free* T_3 concentration is still not generally available.

C. Thyroxin-binding Globulin Concentration (TBG): The thyroxin-binding globulin is the main binding protein for T_4 and also binds T_3. The RT_3U provides an index of its concentration. RIA methods are in the offing.

D. Thyroid Stimulating Hormone (TSH): The ability to measure thyroid stimulating hormone (THS) by radioimmunoassay is a major advance in the investigation of thyroid disease. *It is the most sensitive single indicator for primary hypothyroidism* and is uniformly elevated in hypothyroidism caused by intrinsic thyroid deficiency (whether idiopathic, secondary to surgery or to radioactive iodine, etc). It readily distinguishes between primary hypothyroidism and hypothyroidism caused by pituitary deficiency

4. RT_3U test. Schematic representation of the competition of plasma proteins and resin for added radioiodinated T_3 tracer. The drawing is not intended to be quantitative.

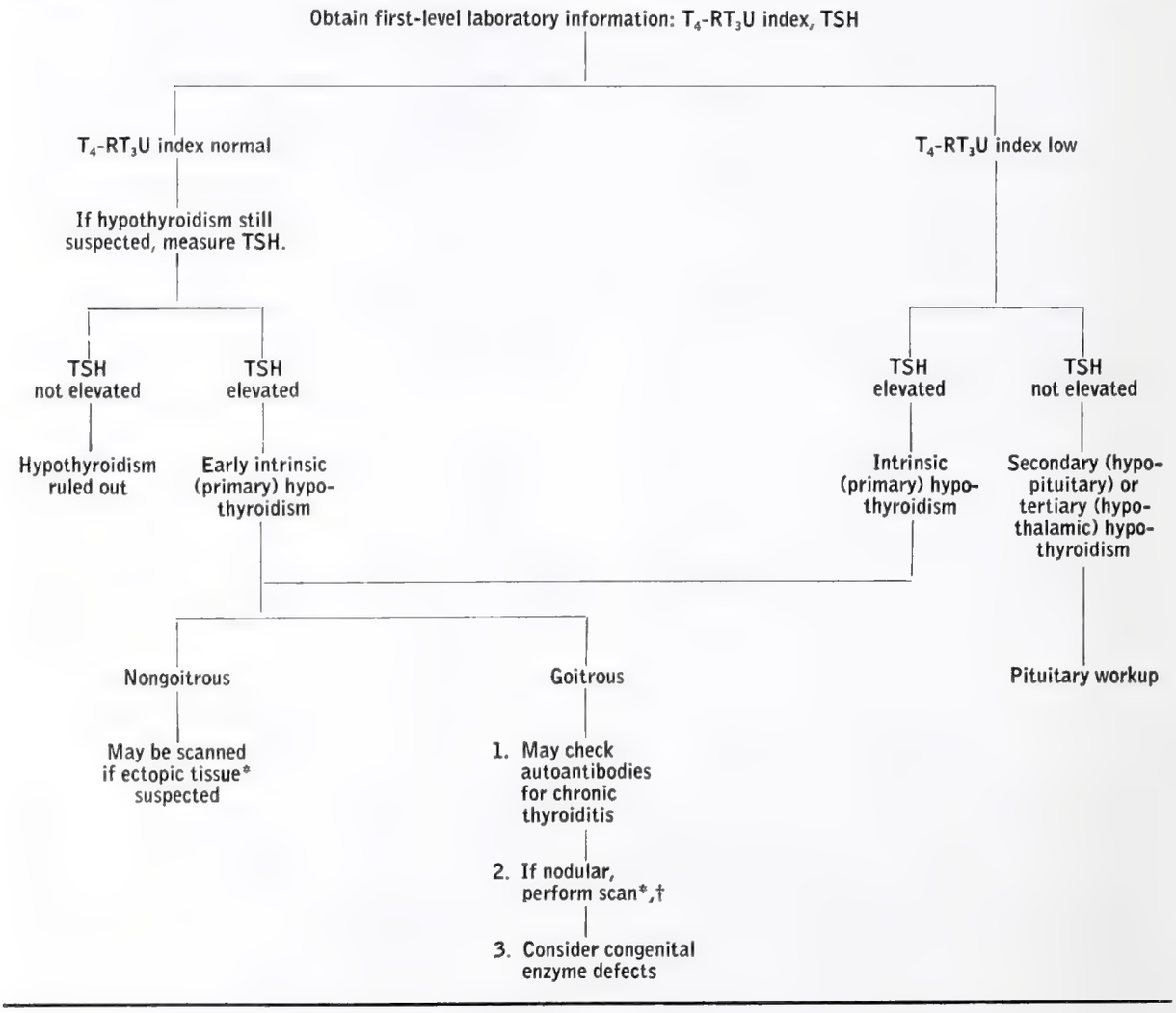


of TSH. Since primary hypothyroidism is the most common form of the disease, the TSH assay is the simple way to rule out an associated pituitary deficiency. It is also an excellent test to evaluate adequacy of replacement therapy in the treatment of hypothyroidism. Cases of hyperthyroidism secondary to oversecretion of TSH by the pituitary gland are rare. TSH assays cannot distinguish readily between low values within the normal range in euthyroid individuals, or the depressed level found in people who have hyperthyroidism.

E. Thyrotrophin-Releasing Hormone (TRH): Stimulatory tests with TRH are currently research procedures and are not yet standardized. In principle, such tests should be valuable in assessing the hypothalamic versus pituitary contribution to thyroid disorders.

F. Antithyroid Antibodies: Commonly, the antithyroglobulin antibodies (ATA) are

5. Suggested laboratory workup when hypothyroidism is suspected.



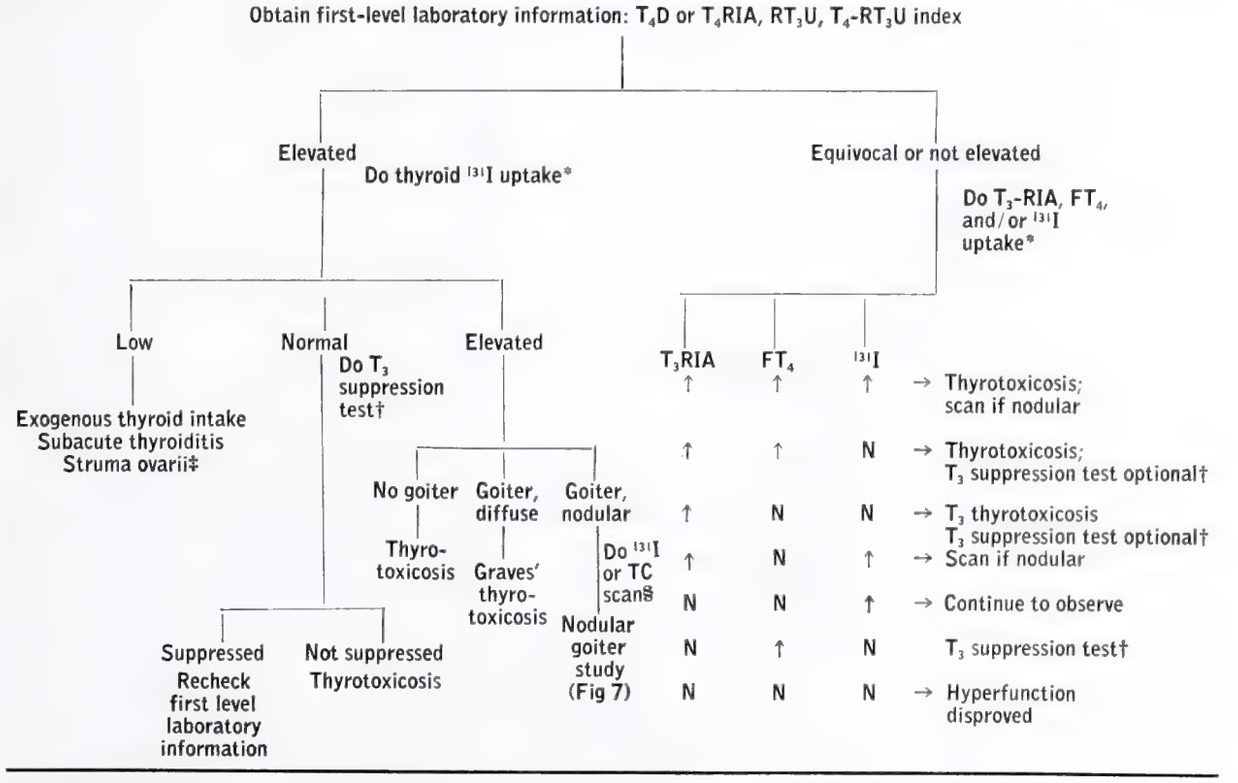
*If pregnancy is suspected, do not administer radioisotopes.
†Technetium may be used for scanning, but ^{131}I is necessary if an uptake is needed.

estimated. The test is most useful in the diagnosis of chronic autoimmune thyroiditis (Hashimoto's thyroiditis), although it is not invariably positive in this condition. It may also be positive in low titers in a number of other conditions (for example, primary myxedema, Graves' disease, the recovery phase of subacute thyroiditis). The antimicrosomal antibody titer can be measured by some laboratories; it is said to be more specific for Hashimoto's thyroiditis, but less sensitive than the ATA assay. A combination of the two gives a more thorough evaluation when one is considering the possibility of chronic thyroiditis.

G. Long-Acting Thyroid Stimulator Concentration (LATS): The LATS test is a measure of the long-acting thyroid stimulator concentration. LATS is found in about 60% of patients with active Graves' disease and is detectable in about 50% of patients with infiltrative eye disease without thyrotoxicosis. If there is pretibial myxedema (and especially if both of these extrathyroidal manifestations of Graves' disease are present), the percentage is even higher. LATS assay in conjunction with the T_3 suppression test is helpful in making the diagnosis of euthyroid Graves' ophthalmopathy.

H. Radioisotopic Tests: The main usefulness of the radioactive uptake tests is in the evaluation of goiters, nodular lesions, and ectopic thyroid tissue, and in the definitive identification of Graves' disease

6. Suggested laboratory workup when hyperthyroidism is suspected.

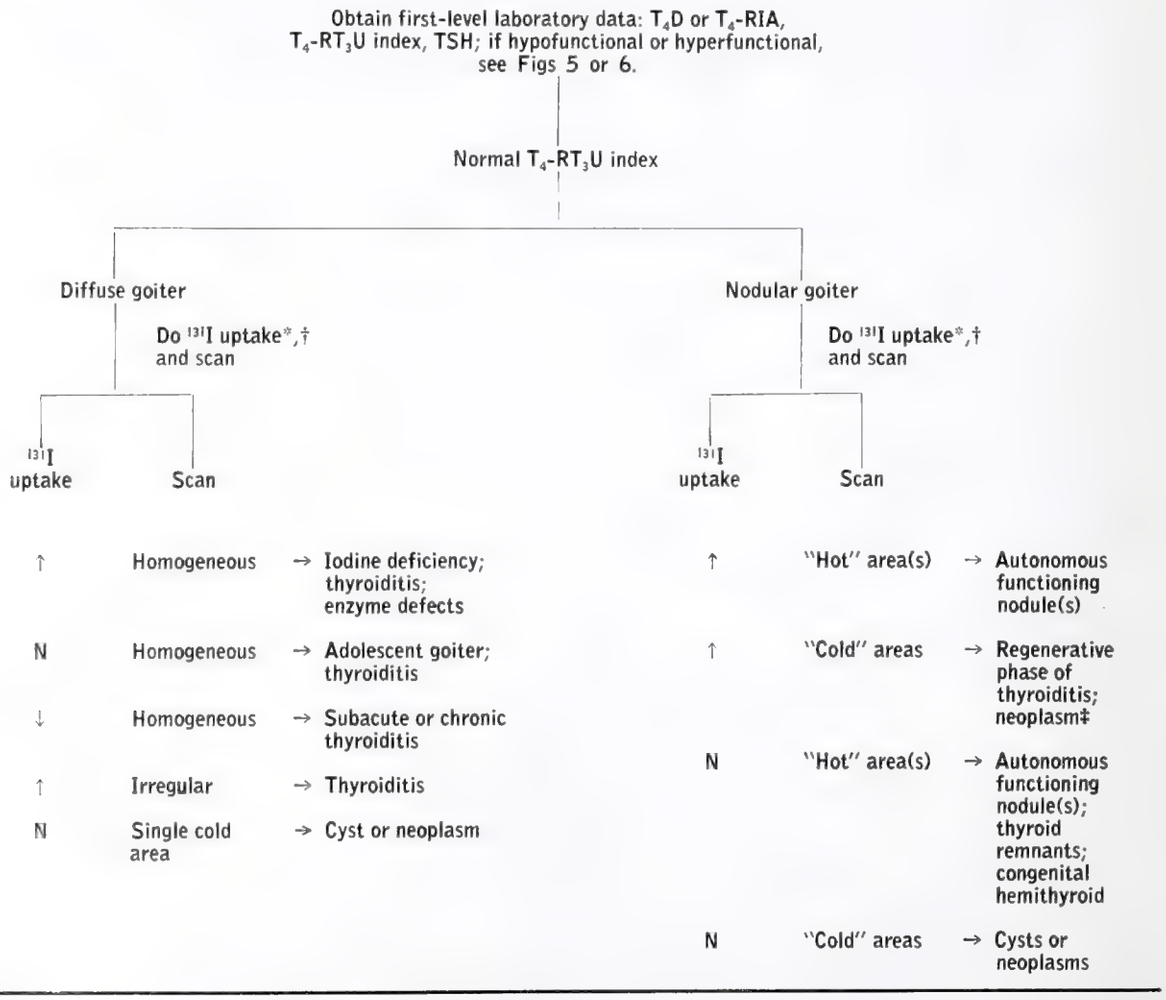


*If pregnancy is suspected, radioisotope should not be administered.
†The T_3 suppression test must be performed with caution and may be dangerous in certain cases (see text).
‡If a pelvic mass is suspected, the pelvis should be scanned for radioactivity.
§Technetium may be used for scanning purposes, but radioiodine is necessary if an uptake is desired.

(nonsuppressibility of homogeneous iodine uptake). It is also helpful in identifying subacute thyroiditis of factitious thyrotoxicosis in conjunction with plasma T_4 determinations, since a characteristically low uptake is seen in these conditions. A tracer dose of radioactive iodine (usually ^{131}I) is administered orally and 24 hours later the radioactivity of the thyroid gland is measured with the result expressed as the percentage uptake of the total tracer dose given. This percentage is increased in hyperthyroidism and decreased in hypothyroidism, but at present there is appreciable overlap between the abnormal and normal ranges in both directions. Recently, the increase in dietary intake of iodine has decreased the normal range from the classical standard of 15-45% of the administered dose after 24 hours to a lower figure which is yet not well determined.

It is important to identify the use of iodine-containing medications, mineral-vitamin supplements, high-iodine health

7. Suggested workup for clinically euthyroid patient with goiter.



*If pregnancy is suspected, do not administer radioisotopes.
†Technetium may be used for scanning purposes, but radioiodine is necessary if an uptake is desired.
‡Rare but possible.

foods, and previous testing with iodinated contrast media, as all these agents will lower the ^{131}I uptake.

If pregnancy is suspected, radioisotope should not be administered.

Thyroid hormone given to a euthyroid patient in replacement doses should suppress the thyroid uptake to less than one-half of the initial uptake, and usually to 5% or less of the administered dose of radioactivity after 24 hours. The suppression test using T_3 is usually carried out by giving between 75 and 100 μg of T_3 in divided doses daily for seven or eight days. At the end of that time, but while the T_3 is still being administered, a repeat tracer dose of radioiodine is given. The absence of suppressibility is found in all patients with hyperthyroidism, as well as in those with autonomous hyperfunctioning nodules, and in about 50% of patients with euthyroid Graves' disease. It is a useful test when it is difficult to decide whether a patient has thyrotoxicosis with normal thyroid function tests (although this situation has been largely cleared up by the use of T_3-RIA), or in cases where there is infiltrative Graves' disease but the thyroid function tests are normal (euthyroid Graves' disease). In this situation, LATS measurement may also be useful in that it is positive in many patients with euthyroid Graves' disease.

The T_3 suppression test must be performed cautiously or not at all if heart disease is present or is suspected, since occasionally these doses of T_3 may precipitate cardiac symptoms. Propranolol, in the absence of conditions which may contraindicate its use, may be used to diminish symptoms of hyperthyroidism which may develop during the test.

Scanning of the thyroid is usually done with ^{131}I because this isotope provides several items of information simultaneously. Technetium also can be used for scanning (with less radiation exposure), but uptake measurements are unreliable. Scans are useful for the identification of retrosternal thyroid, ectopic thyroid tissue, postoperative remnants (especially in the treatment of thyroid cancer) and for visualizing hot and cold regions in enlarged thyroids.

Figs 3, 5, 6, and 7 summarize thyroid function test findings in many common clinical entities, and provide a flow sheet for the laboratory investigation of the three most common clinical problems related to the thyroid. It is obvious that clinical judgment takes precedence over laboratory findings. The tables are intended simply to streamline and make more efficient the use of diagnostic tools which recently have been greatly improved.

Dr. Goldzieher, Director, Clinical Sciences and Reproductive Biology, Southwest Foundation for Research and Education, PO Box 28147, San Antonio, Texas 78284.

Dr. Menendez, Chief of Endocrinology, Department of Medicine, Brooke Army Medical Center, Fort Sam Houston, Texas 78284.

Rural health care: problems and prospects

Louis E. Gibson, MD; Marion R. Zetzman, DrPH

Many rural problems of the past have been solved. Municipal water supplies have been extended to farms, sanitation has been improved, and electricity has been made available almost universally. Although it is no longer possible to support a family from the income produced from 160 or 200 acres of farmland, small landowners now supplement their incomes with jobs in town. Many towns of 5,000 to 20,000 have sufficient small industry to support the surrounding rural areas.

Cities continue to bulge at the seams, becoming increasingly unacceptable ecologically. High taxes discourage the urban resident. Streets are congested, crime rates are high, and pollution is evident. Costs of city living continue to escalate. Industries, saddled with ever heavier labor, transportation, and tax burdens, are moving out of the cities. Land development companies are finding a ready market among disenchanted city dwellers for attractive home sites near small towns. Many are willing to commute 50 to 75 miles to city jobs. The next decade will mark a slowing or even a reversal in the rural population decline. Paralleling this revitalization in the economy and population of the rural area will be a concomitant need for increased medical care.

The current problems of rural health delivery are real and complex. Steps must be taken now to improve physician distribution as well as the quality, availability, and accessibility of services to rural residents. This article addresses issues of community need, factors that have inhibited development, and needed studies for expanding medical care services. An effort that is under way to improve health care to one rural population is described.

The Need

During the 1920's and 1930's and even into the early 1940's, nearly every rural community in the United States had at least one physician. Towns of 5,000 to 20,000 often had several. For the past 20 years there has been a continual decline in the number of physicians in practice in rural areas. Physicians who have died or retired have not been replaced. Most communities of less than 1,000 population are near enough to larger (2,000 to 5,000) towns that, given our present highway system, they could manage without physicians. However, most towns of 2,000 to 5,000 have neither physicians nor facilities to take care of the surrounding rural population. In many rural communities there is almost no preschool screening for visual, speech, hearing, and dyslexic problems and no facilities to handle these problems even when they are discovered by a perceptive teacher. In areas that do have a minimal number of physicians, nurses, and technicians there is little ready access to regularly scheduled continuing medical education programs.

Many rural communities have neither organization for nor experience in recruiting and screening physicians, making them peculiarly vulnerable to the incompetent and the malcontent. In most rural communities there are few facilities for medical care or hospitalization of the medically indigent. Few programs have evolved for seeking out rural people with medical problems and directing them to sources of care. Consequently, rural residents often unknowingly allow chronic minor illnesses to progress into severe advanced diseases.

Much attention has been given to the proliferation of hospital beds in the urban

areas, the concentration of physicians in the cities, and the escalating costs of urban medical care. In contrast, many rural health facilities too often do not meet the specifications for accreditation or third-party payer participation. Staffing is often inadequate because nurses and other allied health personnel, trained in and oriented to the city, do not wish to work in what they regard as an inferior medical environment.

With the surplus of beds and physicians in urban areas and good four-lane highways, an argument can be made that the city should provide primary as well as specialized care for the rural resident. This ignores the economic burden, the inconvenience, and the frustration of the rural patient forced to obtain medical care in a large, urban, medical complex far from home, family, job, and friends. It subordinates his basic needs to the city dwellers' convenience and comfort.

The Physician

Why does the young physician tend to prefer urban to rural practice?

In the 1940's most physicians were general practitioners; since then, there has been an accelerating trend toward specialization. Federal grants have been made available to medical schools to further training in specialties and subspecialties. Grants have been made available from federal or private sources for a greatly expanded research program. These activities, although excellent in themselves, have done little to foster primary care services where needed or to satisfy basic patient care demands.

Until recently, few medical schools emphasized primary care. Some schools offer preceptorships with physicians in rural areas, but most students graduate with experience limited to inpatient care in large urban hospitals. There is a need to more clearly define "primary care" in terms of what skills are needed and what functions a rural practitioner should undertake. Little research has been done, in fact, on *what type of physician* should be directed to the rural areas or on *what type of training* these physicians should have. In the future, medical schools must place more emphasis on programs and secure the means to adequately expose students and residents to practice in rural medical facilities. Without having seen either the *needs* or the *possibilities* of a medical practice in a rural community, future practitioners will have little desire to locate in the smaller towns.

Should a young physician complete a family practice residency program and desire to locate in a rural setting, he will find that good medicine requires good management and a good facility. A new medical practice, especially in a rural area, requires a significant capital investment for facility and equipment. Certainly basic laboratory screening and diagnostic tests, x-ray and other equipment must be available. Since the physician's training is by necessity limited, he is in need of convenient specialty consultation. As the sociological inclination of our society is to work fewer hours, the physician needs associates to rotate night calls, to cover in case of illness, and to exchange times off for family, hobbies, vacations, and continuing education.

As physician recertification becomes more common, the accessibility of appropriate and adequate training facilities becomes increasingly important. With the inevitable arrival of some type of national health insurance program, the physician will have increased demands on his time for dealing with third-party carriers, nego-

tiating with government agencies, and coping with the proliferation of required forms. In both rural and urban areas, physicians need legal counsel to meet the escalating problem of professional liability, and for accounting advice to handle new regulations constantly being promulgated by Medicaid, Medicare, and private insurance groups. With the advent of professional standards review organizations, the physician must accumulate economic and medical data to support the norms of his practice by computer techniques that are not generally available to the rural physician. He needs convenient access to good laboratory, electrocardiographic, radiographic, and other diagnostic and treatment methods, including accounting and record keeping, purchasing, and other cost-cutting and efficiency-producing procedures. He may find advantages in group associations for pension and retirement benefits. Few of these many social, economic, and medical aids are readily available to the rural physician.

In order to decelerate the trend away from rural medical practice, a new type of rural medical climate needs to be created—one that stresses group practice clinics affiliated with medical schools, satellite clinics in smaller communities associated with medical groups in larger towns, management systems that enhance operational efficiency, local allied manpower training programs, expanded communication linkages, opportunities for local continuing education, and upgrading of community hospital facilities. Communities themselves must address the issues that, in part, attract and retain health professionals: quality of public schools; availability of cultural, entertainment, and outdoor recreation opportunities; adequate housing; and industrial-business development.

There has been much talk about offering incentives to rural medical practice in the form of medical school or training subsidies that must be paid back in some form. There has even been discussion about mandatory assignment of young physicians to rural areas for specified periods of time. Since these approaches attack none of the real root causes of the problem, they can afford only partial and unsatisfactory solutions.

Unless adequate facilities and environments conducive to the practice of quality medicine are created in the rural communities, young physicians will not go to these areas in sufficient numbers to alleviate the maldistribution problem extant.

Needed Studies

Combining the capacities of the area health planning agencies, medical schools, county medical societies and private medical groups, state and county government agencies, community colleges, community hospitals, and private citizens, investigative studies need to be made. These should include the following:

1. An updated survey of current rural, county, and community medical manpower needs, including physician/patient population ratios, the availability of nurses and technicians, and public health facilities.
2. Realistic determination of the size of a community or area needed to support a two- or three-man family practice or primary care group.
3. Determination of the patient population load that could be adequately handled in a rural outpatient facility.
4. Determination of the patient load that requires referral to an intermediate facility, such as a multispecialty clinic. An intermediate facility might be described as

a 5- to 40-man multispecialty group having adequate outpatient, laboratory, x-ray, and other diagnostic facilities to handle a significant local outpatient load, as well as referrals from satellite communities.

5. Determination of the patient load that would need urban referral for care not available in the intermediate facility.

6. Household sample surveys to determine patterns of health service use, attitudes, and practices in small communities.

7. Studies as to the extent and type of training needed by primary care physicians for practice in (a) rural outpatient clinics without hospital beds, (b) rural outpatient clinics with community hospital available, (c) solo practice or family practice groups in intermediate-size communities of 5,000 to 10,000, (d) multispecialty clinics in intermediate areas of 10,000 to 50,000, and (e) metropolitan areas.

Additional studies should evaluate and define the following:

1. The role of primary care internists, emergency physicians, family practice physicians, nurse-practitioners, physician assistants, registered nurses, licensed vocational nurses, and technicians in each of the aforementioned environments.

2. The resources and responsibilities of community colleges, community hospitals, community industrial foundations, multispecialty clinics, and medical schools in meeting rural health manpower needs.

3. Specific demographic, economic, and health status information relating to the particular rural area under study.

4. The interest in small-community practice among medical students and family practice residents.

5. What medical schools might do to increase the supply of rural physicians and allied health personnel.

6. The extent to which state and local foundations might be interested in developing rural medical programs.

7. The possibilities of state assistance to rural counties in forming rural health manpower associations.

8. Needs in mental health, public health, and preventive medicine.

9. Awareness of the existence, nationally, of prototype programs encompassing the enumerated aims and objectives.

Cooperative Program in Northeast Central Texas

A specific program addressing many of the aforementioned items is being developed by the Medical Arts Clinic Association of Corsicana and The University of Texas Health Science Center at Dallas, Southwestern Medical School, Department of Environmental and Community Medicine.

The Medical Arts Clinic of Corsicana, a 20-member multispecialty clinic, has long recognized that private medical care must turn from the hospital-oriented base to comprehensive, affordable outpatient medical care in order to efficiently handle the patient load that will arise from any national medical care system. This clinic has developed a sophisticated computerized medical data-collecting and billing system, comprehensive automated laboratory and x-ray facilities, a 49,680 m^2 (54,000 sq ft) modern outpatient facility with an unimpeded internal traffic flow, and 20 board-certified specialists who serve a multicounty rural population. The clinic also recognizes its weaknesses in delivering primary medical care to the local citizenry and to those from nearby communities, the portents of a declining physician population, and deficiencies in educational and training programs in the surrounding nine-county service area.

The clinic has an affiliation agreement with The University of Texas Health Science Center at Dallas to find mutual answers to their related needs. Jointly, the school and the clinic applied for and received a Regional Medical Program of Texas contract for the study of rural primary medical care, the possibilities of forming satellite affiliations in a nine-county rural area, and the development of a nine-county rural health manpower association. The study has been completed and a report will soon be released. Agreement has been reached on a rotating residency program between the school's Division of Family Practice, the Medical Arts Clinic, the Navarro County Memorial Hospital, and other outlying institutions; student preceptorships with rural physicians in the nine-county area (funded through a special project grant from the National Institutes of Health, USPHS); an expansion of the Navarro County Community College LVN program, and establishment of a two-year associate degree RN program in affiliation with El Centro College of Dallas, as well as training x-ray technicians and laboratory workers; and several approaches to continuing education for physicians, nurses, technicians, anesthetists, hospital employees, and other allied health personnel at both the Medical Arts Clinic in Corsicana and The University of Texas Health Science Center at Dallas.

Under study is a program to outfit a van and hire personnel to perform tests for speech, hearing, and eye defects in the public schools; deliver inoculations at the school and preschool levels; undertake adult screening for metabolic, cardiovascular, and other diseases; and contribute to the development of a coordinated mental health program, now sorely lacking in most rural areas.

Alternate types of satellite affiliations are being studied. In rural communities with an adequate number of physicians, such an affiliation might involve only continuing education. In underserved communities it could include batch processing computer programs for the accumulation of medical data and medical billing, including third-party forms and other data; electrocardiogram interpretation; sophisticated laboratory analyses; and data exchange. Actual satellite clinics might be established in areas where there are no physicians, or in association with one or more physicians now practicing. In these clinics many economies could be effected in management, capital equipment expenditures, and medical data gathering facilities. Such satellite operations could be financed through nonprofit industrial foundations in the rural communities, participation by local physicians, or private foundation grants. Consideration is being given to salary guarantees underwritten by the Medical Arts Clinic Association or partnership arrangements for physicians who agree to practice in such satellite facilities.

The nine counties under study cross four council of governments districts and three health service areas. The aim of the affiliation between the medical school and the rural multispecialty clinic is the development of a rural comprehensive medical care delivery system. If this system succeeds and becomes a reproducible prototype, it will illustrate how broad-based cooperation can solve rural medical problems.

Conclusion

Beyond dispute, good medical care requires good long-range planning, good economics, and good management. In

providing good care, the doctor/patient relationship must be nourished. The incentives that encourage young men to dedicate 15 years of their lives preparing to become part of the American medical care delivery system must be preserved. Cooperation between planning and practice must be maintained. We must build on the system we have. Where it is weak, it should be strengthened; where it is strong, it should be used. The physician is the key in any system of medical care delivery. He may be reinforced and supplemented, but he cannot be replaced. His standards must be kept high and his dedication encouraged. In turn, the physician must recognize his responsibility, not only to his individual patients, but to the delivery of medical care to all who require it.

Dr. Gibson, President, Medical Arts Clinic Association, Corsicana, Texas 75110.

Dr. Zetzman, Assistant Professor and Acting Chairman, Department of Environmental and Community Medicine, The University of Texas Southwestern Medical School, Dallas, Texas 75235.

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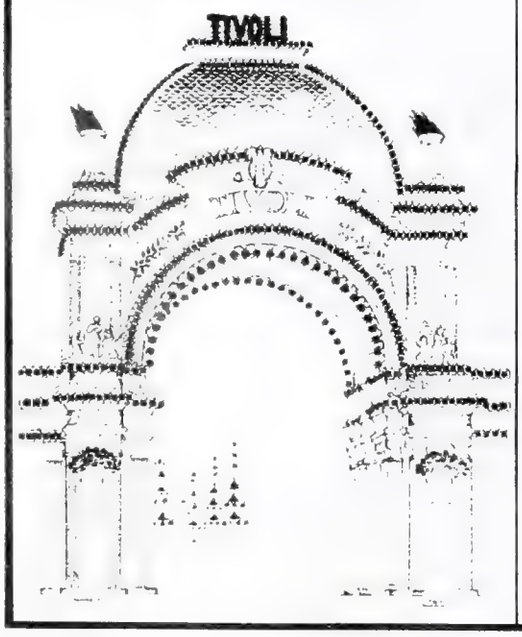

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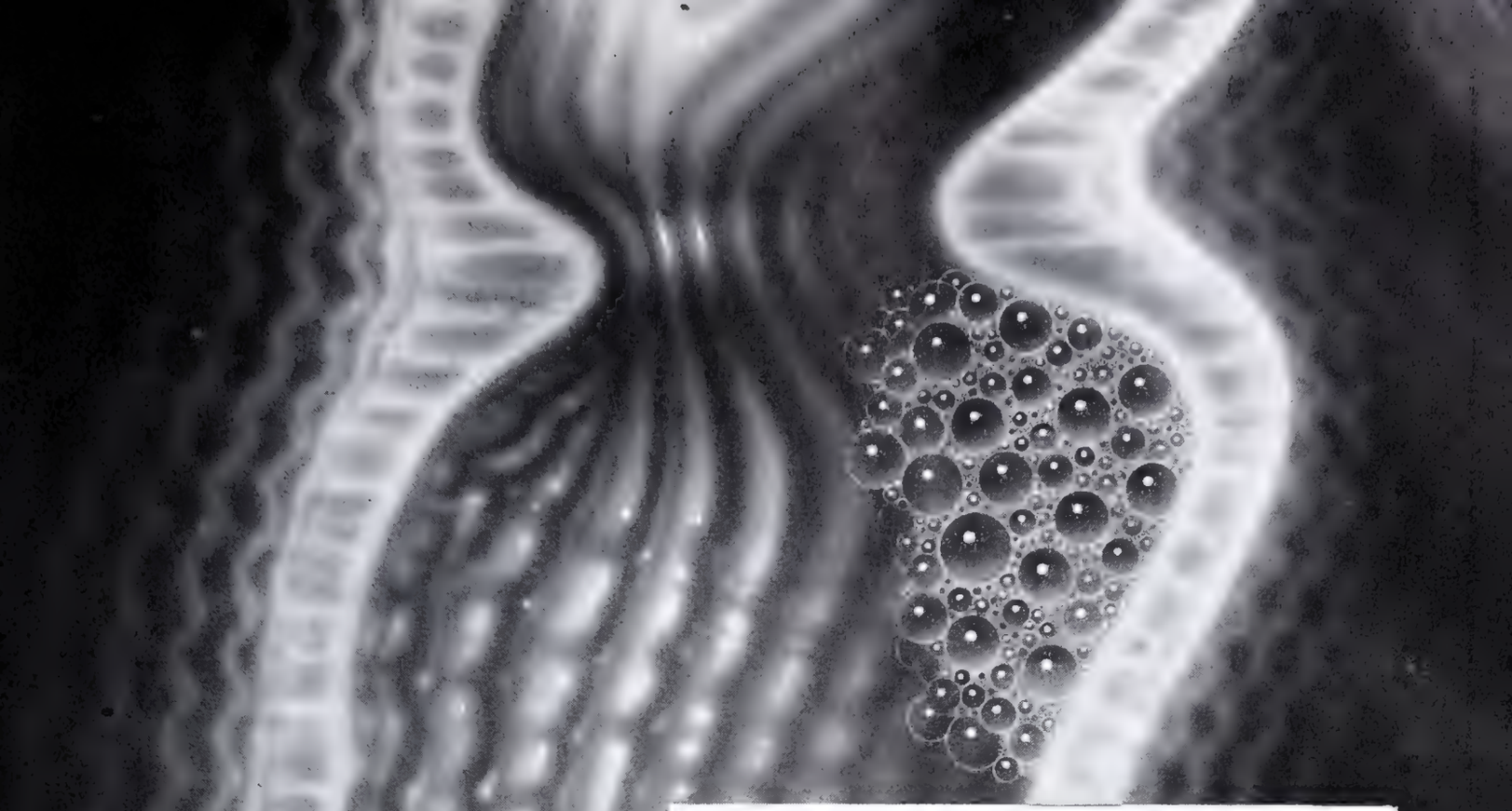

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Preferences for family practice among entering medical students

George G. Meyer, MD; Russell L. Adams, PhD; Jean Holcomb, BA

It is widely believed that the decrease in number of physicians providing primary medical care constitutes one of the most critical elements of the doctor shortage.[1] The present impetus for establishing family practice residencies receives support from the public, the medical community, and the government. However, the success of various attempts to increase the number of primary care physicians ultimately depends on the acceptance of this type of practice by medical students and practicing physicians. Previous studies have shown that student interest in "general practice" tends to decrease throughout medical school[2] and that a large number of physicians leave primary care because of the workload.[3] It is likely that the present efforts to influence the student's choice of family practice and other "first-contact" specialties will not be completely successful unless more is learned about why students enter and physicians remain in primary care. Therefore, we have undertaken a prospective study of medical specialty choice.

Although several studies on specialty choice have been reported in recent years,* the present study is of particular interest because of the emergence of family practice as a specialty. In contrast to various retrospective studies, the present work has the advantage of being prospective and longitudinal in design. Further, the subjects in this study will be followed at regular intervals not only throughout medical school, but also during and after postgraduate training. We hope to learn how satisfied each student is in practicing his chosen specialty.

The entering student arrives at medical school with certain notions about what it means to be a physician, together with a set of attitudes and beliefs about the various specialties. Although the final selection of specialty training is made several years later, the decision-making process is continuous throughout medical school. The student's personality, family background, special talents, and beliefs about the specialties all play a role in his eventual choice.

In the initial part of this study, we investigated the attitudes of entering medical students toward various specialties and types of practice. A short questionnaire was administered on the first day of class in order to minimize the influence that medical training or faculty attitudes might have on the students' preferences. The subjects of this study are 116 students (96% of the class) who entered The University of Texas Medical School at San Antonio in 1973.

Results

Students were asked what type of specialty training they tentatively expected to pursue after graduation from medical school. The largest group (40%) chose "general or family" practice (hereafter referred to as family practice), followed in order by internal medicine (16%), surgery (11%), and pediatrics (10%).

Each student was asked to indicate the degree of certainty he felt about his first specialty choice. While 45% indicated that they were "moderately" or "very" certain, 55% indicated that they were "moderately uncertain" or "not certain." Those preferring family practice were more certain of their choice (52% felt "moderately" or "very" certain) than were those choosing all other specialties (36%).

What factors seem to influence a stu-

*A bibliography is available from the authors.

dent's specialty preference? Fig 1 lists 17 factors that students in this sample rated in importance. The largest group of students felt that the degree of challenge a given specialty offered was the single most important factor governing their choices (29%). Other considerations which were mentioned by a relatively large number of students were the desire to work with a specific population of patients, and special skills or experiential background already possessed by the student. Income and prestige were not reported to be important considerations by these entering students.

Although family practice was the most popular choice, the students felt that it offered the least financial reward and had the poorest working conditions, but provided the highest quality of patient contact of any of the six major specialty areas (internal medicine, psychiatry, surgery, family practice, obstetrics-gynecology, pediatrics).

Apparently, these students felt that the high quality of patient contact enjoyed by the family practitioner outweighed the poor working conditions and relatively low pay.

Psychiatry was rated as having the best working conditions and received the second highest ratings concerning income, prestige, and quality of patient care; yet only 4% of the students planned to enter this specialty. Many students indicated that psychiatry was among the least desirable fields to enter.

The large percentage (45%) of students stating that they were "very" or "moderately" certain of their specialty choices on their first day of class prompted us to determine what sources of information these entering students used to make their decisions. The majority stated that direct contact with physicians other than the medical school faculty was the primary source of information concerning income, life style, and working conditions of the various specialties. This is somewhat surprising since most physicians apparently have little time to spend with premedical students.

Just as direct physician contact was the primary source of specialty information prior to medical school, most students (61%) stated that brief preceptorships would be the most beneficial source of information during their medical school experience.

We also asked what type of medical practice the students expected to enter after completing their medical training. Most (64%) said that they planned to enter private practice. Less popular choices were teaching and research (16%) and salaried positions in public institutions (8%). When asked to rank different types of medical practice in terms of the prestige held in the community, 56% indicated that private practitioners have the highest prestige level, followed by medical professors

1. Primary factors that influence specialty choice preferences.

Factors	Percent
Challenging vs. routine program	29.3
Desire to work with specific population of patients	13.8
Special skills or experimental background already possessed	12.0
Control over working hours and conditions/life styles options	11.2
Possibility for personal vs. impersonal patient contact	10.3
Interest in peoples' lives	7.8
Degree of responsibility over patient care	4.3
Shortage of specialists in the chosen field	3.4
Continued care for a patient vs. limited contact with referrals	2.6
Length of residency program	1.7
Immediate rewards of therapy; action; direct approachability of problems	.9
Manual dexterity vs. diagnostic capabilities	.9
Other	.9
Prestige	.0
Compatibility of self-image with future associates	.0
Income considerations	.0

(27%), and medical researchers (13%). Hence, the largest number of students plan to enter private practice which is the highest prestige group. Academic medicine, which was considered second highest in prestige, attracted the second largest number of students.

Physicians enjoy one of the highest prestige levels of any professional group in the nation. Since all specialty groups hold important positions in our society, there is relatively little difference in prestige level among them. However, there is considerable difference in the amount of prestige accorded to physicians working in different settings (private practice, medical school, government institutions, etc), at least in the estimation of incoming medical students. Although prestige may not be an important consideration in the choice of specialty, it may be a factor in deciding on what type of medical practice to enter.

This group of medical students first considered going into medicine early in life. At least 60% first considered it before graduation from high school and only 10% first considered it after college. However, the decision to pursue a career in medicine was made much later by the majority of students. Twenty-nine percent did not decide to enter medicine until the last two years of college, and 30% did not decide until after college graduation. The latter fact is reflected in the unusually large number of older students in the class.

We found that 38% of the students planned to practice in a small to medium sized city (about 100,000 population), while an additional 17% expected to practice in a small town (about 10,000 population) or rural area. Of those preferring family practice, 74% intended to practice in either a medium-sized city, a small town, or a rural area.

Although few of these students planned to practice medicine in their home towns, most did plan to practice in Texas. However, 27% considered practicing in another state.

Discussion

A study of students who entered medical school in 1956 showed that while 40% preferred "general practice" as freshmen, only 10% actually chose this field after graduation. Wasserman and associates[2] found that one-half of the students went on to pursue their original specialty choice while in medical school; however, many of those who did change came from the group originally preferring general practice. More recently, it has been reported that 25% of the 1968 and 1969 freshman classes at the University of Colorado Medical School preferred general practice as a specialty.[4,5] In comparison with the Colorado classes, a larger proportion of students in our study preferred family practice upon entering medical school. The study by Wasserman, however, suggests that there will be a significant reduction in the number of students actually pursuing this field.

Although we recognize that many students who originally preferred family practice will change their specialty preference, we expect that this change will not be as great as that reported earlier. There is reason to believe that the new residency requirements, the decline of rotating internships, the increasing availability of family practice residencies, the overproduction of certain specialists, and public opinion will stabilize these choices. In addition we have noted a shift in medical school faculty attitudes which may reduce the attrition rate.

It is of considerable interest that intrin-

sic factors such as the degree of challenge are ranked much higher than extrinsic values such as prestige or income. In a study of medical students' attitudes toward specialties, Becker and associates[6] also reported that little attention is given to the criteria of money or prestige, but that working with patients is considered of great importance. However, there is some evidence that the relative importance of these factors tends to change over time.[7]

Students who believe that family practice has poor working conditions and relatively low pay still expect to enter this specialty. Therefore, the quality of patient contact is initially of sufficient importance to offset the undesirable characteristics of this specialty. However, this balance may be a delicate one since a large number of physicians do eventually leave primary care.[3]

While psychiatry is viewed as having the best working conditions, few students plan to enter it. However, it is the impression of the authors that psychiatry tends to acquire more "transfers" from other fields over time. These patterns will be studied in this group.

There is a trend toward the shortening of study time with increasing numbers of three-year programs, elective senior years, MD-PhD programs, and six-year BA-MD programs. Since rotating internships and compulsory military service are being phased out, there will be a significant reduction in the amount of time which might be used for reflection on one's career choice. As a result, an increasing number of specialty choices will be made at a younger age and with less exposure to a variety of medical specialties. Hence, the orientation which students have upon entering medical school may play a greater role in their subsequent choices.

Virtually all US medical school graduates during the 1970's will undertake residency training.[8] Since this prediction includes a growing number of students interested in family practice programs, it is necessary to plan for more residency training opportunities in this field. According to a recent study, more than 2,200 medical school seniors want to enter a family practice residency, but only 1,600 openings presently exist.[9] While new family practice training positions open each year, even more places will be needed if present trends continue. A major implication of our study is the need to anticipate and identify trends in specialty choice in order to provide adequate postgraduate training programs.

Summary

This prospective study was undertaken at a time when there is increasing pressure on medical schools to produce primary care physicians. One of the major findings is that a high proportion of students anticipate entering family practice. A second important finding is that the majority of students are interested in practicing in small or medium-sized towns. In view of the need for redistribution of physicians, it is encouraging that so many of the students expect to practice in areas where they are needed.

It will be informative to follow these students as they decide upon and enter their fields of postgraduate training. We are presently undertaking a study of these students as they finish their second year of preclinical studies.

At this point in the study, it can be said that this group has heard the message about the need for primary care physicians, and that they expect to practice

where physicians are needed, and where they can be of greater service to patients.

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Dr. Meyer, Professor, Department of Psychiatry; Dr. Adams, Assistant Professor, Division of Psychology; Ms. Holcomb, Medical Student, The University of Texas Health Science Center, 7703 Floyd Curl Drive, San Antonio, Texas 78284.

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Role of history in educating future family physicians

James Polk Morris, PhD

Today a new sense of professionalism is necessary in medicine. The historical approach can help us be more professional by placing our present situation in perspective. For example, reflection on the history of family physicians seems especially pertinent now that new waves of young doctors are being trained in this specialty. Unless we increase our appreciation and understanding of the present and past, we may be prone to oversimplify the options for our future.

The Value of History

To examine the past of family physicians, we first must consider the value of history. Henry Ford said, "History is bunk,"[1] but Dr. Stanford E. Chaillé, former dean of Tulane School of Medicine, had a different view: "The chief value of history is to enable us better to comprehend the present and foresee the future."[2]

What can a historian say that will be meaningful to you in your daily practice? I offer renewed feeling of respect for your discipline—family practice—and with it a new sense of professionalism. Will family physicians be the new ombudsmen for their patients and for medicine itself? What course have they followed through history, and where does it lead them from here?

Since the mushrooming of science in the 19th century, and the rise of what is labeled "scientific medicine," medicine has in numerous ways been involved in a knowledge explosion. As a consequence, specialism has been medicine's central theme since the late 19th century. An American physician, Dr. Austin Flint, realized this, and in 1886 he told his British colleagues that specialism was inevitable because of "the unavoidable subdivision of medical literature and medical instruction into special departments."[3] However, he pointed out that there would be drawbacks to specialism: "A dangerous tendency is to give such a limitation to a specialty as will lead to withdrawal from the common interest of the profession. A medical specialist should not thereby in his sentiments and conduct, be any less a physician; the honor, dignity, and usefulness of the profession, as a whole, should be as sacred in his estimation as if he were not a specialist. If the effect of specialism be otherwise, alas for the medical profession for the future, as regards the respect for others and the self-respect of its members!"

Flint's comments were all the more prophetic because they came just at the time when scientific medicine was coming into its own. Physicians had to recognize that science was the future in medicine, and that it was generating specialization. Yet, since the era of the rise and acceptance of scientific medicine, any physician's life that we might choose to examine reflects a nagging uncertainty about the commitment of medicine to "gung-ho" science. A Texas physician, Dr. Witten Booth Russ, wrote in his autobiography, "Something, indeed many things, must be done. The family doctor should be restored to his proper place as counselor, guide, and friend to the demoralized sick."[4]

Russ' doubts about the direction of specialism in post-World War II American medicine reflect a problem shared by family physicians since the late 19th century: Because of increasing specialism in medicine, they have undergone one identity crisis after another. They have been given, like Franklin Roosevelt's New Deal in the 1930's, an alphabet-soup variety of labels and names: family doctor, family practitioner, family medical specialist, general practitioner, GP, comprehensive care specialist, and family physician.[5] To extend the food image further, we might say that throughout the 20th century they have found themselves presiding over the gumbo pot of medicine. As various new ingredients and specialties have been added, and the proponents of these new views have become vociferous, the heat on the stove has been turned up.

As the roux, or basic unifying ingredient for the profession, some family physicians have been relegated to the role of trying to

keep the mixture palatable, not let it boil over, and not lose their temper or good humor. The result has been that as each specialty has become increasingly significant and accepted by the public and the profession as a whole, family physicians have felt that the product was being cooked down to lower and lower levels in the pot, the roux getting thicker and thicker. More and more of the young physicians have been opting for another pot. As a result, sometimes the family doctor has gone unrecognized for his day-to-day service in practice. In addition, he has had the nagging feeling of being unable to keep up with the latest medical advances. Unfortunately, this knowledge explosion also has bred a certain amount of condescension toward family physicians by doctors in the entire spectrum of American medicine, from those involved in academic medicine in the university medical centers to the city GP comparing himself to his rural colleague.[6-9]

In reviewing the history of medicine as recently as the late 1960's, one could think that medicine had become too complicated to allow comprehension, let alone coordination and revitalization of the whole. Fortunately several things have happened which may allow the family physician to reemerge as a central key to the future of medicine. Rather than being a hindrance, the knowledge and technology explosion in medicine portends a reorganization of medicine along professional and educational lines which allows every family physician to become more and more in tune with the latest developments in his field. In addition, it has forced an increased awareness that new approaches need to be made and that general practice needs to be revitalized as family medicine.

Needs such as these culminated in the creation of a specialty board of family medicine in 1969.[10,11] Perhaps the evolution of scientific medicine and specialism can now be seen to have served as an emancipatory agent, freeing the physician from the burgeoning facts and fractioned responsibility of his profession, and creating new and broader areas which he may fill to keep health care on the proper track of patient care. During the late 1960's and beginning 1970's, those in family medicine were not completely sure what their role would be. Perhaps they will now come to realize that through a combination of circumstances—scientific, social, and technologic—the tidal wave of specialism in medicine has begun to recede, leaving the family physician as a new bedrock for the profession.

Medical educators are revitalizing contact points with all communities in delivering health care. The competition, jealousy, and too-narrow focus of specialties must fall aside, and there must be a new recognition of the value of family physicians as coordinators of health care in every community. This is essential during the transition phase of emerging federal medical programs. Not only is the family physician the keystone to the success of medical programs intended to broaden the base of distributing medical care, but they also must serve as forces of reason and maturity as well. They know their own communities and the people who are there. Only they can really make the programs fit into the proper niches by serving as both critics and facilitators for the various proposals. Dévil's advocates, as well as administrators and policy planners, are needed in the communities.

Suggestions on a Future of Change

Looking back is almost always enjoyable, and oftentimes instructive as well. Tentative and speculative as they sometimes are, the past and present are all we have to guide us in the future. Many people have suggested that change is the most constant feature of our society today. William Ransom Hogan, a social historian of the republic period of Texas history, has said, "I am not so certain that 19th Century

Texas history continues to exert such a direct impact on today's culture in that state. The essence of 20th Century history, in Texas as elsewhere, is *change,* increasingly and often alarmingly accelerated."[12]

Doctors trained prior to, during, or just after World War II have participated in so many basic changes in medicine that the magnitude of that change is difficult to express. Perhaps the inability to be comprehensive in telling of the rapidity of that change speaks strongly for the importance of identifying various ideas and concepts which have made family practice meaningful. It also prods historians to try to identify what it is that makes the latest generation of family physicians different. What sort of baggage do they carry which especially equips them for today and the future of medicine? How does this compare to the skills, techniques, and attitudes which older colleagues used upon emerging from medical school? And what things do their youth and inexperience cause them not to see and appreciate as important?

Some experts tell us that a generation today has been reduced to a span of six years or less. The burgeoning growth of technology and personnel in medical practice creates a generation gap practically from the moment that today's physician graduates from medical school. To close that gap, a new sense of professionalism, of history and the importance of tradition, can and should be instilled through the efforts of medical educators, individual physicians, and organizations.

It is for the latest generations of family physicians that these activities will have special meaning. In medical school the students ask that they be exposed to clinical experiences as soon as possible. At The University of Texas Medical Branch, courses such as "Introduction to Patient Evaluation" provide a sense of continuity between ideals and the grinding rigor of medical education. Similarly, preceptorships and the further extension of medical education's mission into more communities and hospitals are filling in the gap for young physicians.

Yet it is not just a gap of knowledge which we must overcome in educating young doctors. It is, as well, a generation gap of the potential physician's spirit. It is not possible to pour experience into student's heads; the personal influence of teachers on students to instill a critical and creative attitude toward their profession is indispensable. The preceptor system instills a mature outlook in basic attitudes and principles towards one's profession.

Part of the art of medicine is the attitude of questioning which emerges with the passage of time and the changing of the scientific facts one knows about medicine. The mature doctor changes with new advances, but he also slowly fashions for himself a basic philosophy or outlook of skepticism toward medicine. That is, in practice he tempers all facts with concern and pragmatism in regard to his patient. As one doctor stated,[13] doctors are primarily people of action: "The problem is, when you come right down to it, that you have to start making choices . . . You must have a formula for action. Doctors are people who primarily do things."[14] Physicians are justified in taking pragmatic, oftentimes hardline views of history or any discipline which claims a right, or petitions for the right, to help broaden their views by questioning their fundamental ways of thinking and acting as professionals. Especially is this true today in regard to the increase in federal medical programs in every community. Rather than just opposing them blindly, family physicians need to assert their own value as experts, to question them, modify them, and make them work.

The history of medicine is the story of a noble profession adapting to change in helping people. Enormous change has been a characteristic feature of physicians' personal and professional lives in the past. That is part of both the science and art of medicine—and that is the part of medicine

which seems to hold the key for the future family physician.

Age and maturity allow an acceptance of relativity and an increasing tolerance for absorbing new things and defining whether they are valuable. Medicine of the future must be a flexible, questioning organism which can absorb attack, and remold and refine itself as an indispensable part of society. In addition, medicine must explain itself to the public. The role of the expert in society is never easy or clear-cut, but it is a job that family physicians must take up, by example and by professional activities. We at the Institute for the Medical Humanities wish you well in creating a new relevance for the family physician in future years of service to Texans.

For our part, we accept the challenge of creating significant teaching packages and meaningful experiences and dialogue for students and practicing physicians throughout the state. And we ask that you share with us your thoughts and insights on the problems of helping train students to become good professionals. We need help in trying to make medical education more meaningful for our students. We in turn want to fulfill our obligation by helping keep physicians abreast of the latest in medical education.

There are several important areas which we will be working on in trying to understand the past and future role of family physicians as key elements in American medicine:

1. Will the family physician of today emerge as a new primary vehicle of medicine in the future? Or will he be lightly passed over as the latest wave of the tide of specialism in 20th century medicine? If the former is the case, the family physician could create certainty amid the doubt consequent to the multiplication of health procedures and personnel around the patient.

2. Can the public be accurately or adequately educated to their own role in making decisions in regard to their own health, or will not some of these functions of necessity remain dependent upon medicine as a specialty institution in society?

3. In the light of the increase in medical care technology and administrative personnel, will physicians overcome their competitiveness and recognize that they must work together in directing health care for the patient?

4. How can we best educate both medical students and practicing family physicians in the history of their discipline? How can physicians become involved as teachers of receptivity and tolerance for change?

5. What suggestions do practicing physicians have about educators' work? As medical educators we see ourselves as synthesizers, enablers, and facilitators, to help make more sensible choices for the future of medicine.

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Dr. Morris, Assistant Professor of the History of Medicine, Institute for the Medical Humanities, Department of Preventive Medicine and Community Health, The University of Texas Medical Branch, Galveston, Texas 77550.

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Candid discussion on professional liability

Dr. Brooks: My opening comment is that I see coming from this discussion no red hot answer. I think it is good that we are talking about and studying the problem in much more detail than other states which have jumped into legislation that now is not turning out as hoped. With those thoughts, I call on Dr. Davis to comment on the general problem in Texas, the TMA approach, and our timetable.

Dr. Davis: The specific charges to the study commission represent a different kind of assignment. As a matter of fact, I think that Dr. Webb and I are both agreed that this study commission is really a different kind of study commission. Many such commissions are just window dressing.

The ten or so requirements of this commission are very specific. They also say to report back to the governor, lieutenant governor, and the legislature. I consider the commission a quasi-legislative body which has specific duties. Moreover, the commission is outstanding in the variety and quality of its members. The commission is made up of two state representatives, one senator, and representatives from hospital administration, medicine, insurance, state government, and the public. We have two former state insurance commissioners who are currently insurance company executives. We have two members appointed by the state bar, one who deals with personal injury work and the other considered a defense counsel. Dean Page Keeton has a stature that makes me feel the purpose of the commission is totally serious.

It is my feeling that if the commission can come up with a unanimous report on any aspect of the problem, the recommendation would very likely be passed by the legislature. If we have a 16-2 vote, and the two in opposition are not plaintiffs' lawyers, then the recommendation would probably still go through. However, if the two that oppose an item are plaintiffs' lawyers, then we're going to have to fight their considerable lobbying and legislative influence machine. And I don't refer to it in any derogatory way.

The most important thing for us to recognize about the timetable is that whatever comes out of the commission must be actively pursued through TMA committee work, staff functions, and officers who maintain a continuing liaison with those concerned with the problem.

Dr. Webb: I have been very satisfied with the activities of the commission thus far. Solid progress is being made. The entire commission has been open to any issue that any of the participants desired on the agenda. We have seen to it that all of the issues in which we are interested, particu-

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Editor's note: The following are edited excerpts from the Curbstone Consultation session on professional liability insurance during the recent TMA Conference on Legislation and Medical Service. Dr. Walter A. Brooks, TMA vice president, served as panel moderator. Panelists included Dr. Milton V. Davis and Dr. E. Don Webb, members of the Texas Medical Professional Liability Study Commission; Dr. R. Reagan Hicks, chairman of the TMA Committee on Professional Insurance; Jeff Autrey, TMA attorney; and Paul Gray, director of the TMA Department of Medical Service. Following opening remarks by each panel member, questions and comments were taken from the audience.

larly in relationship with the 22-point TMA proposal, have been placed on the agenda. Many of them have already been discussed, and several have been resolved through positive recommendation.

I am impressed with the fact that every member of the commission is totally aware of the seriousness of the problem and feels that some changes must be made. We keep referring to Dean Keeton. He is a very dynamic character, and his influence on the commission is undeniable. I have been very satisfied with his attitudes thus far.

I would add that when issues come up that are unacceptable to us as your representatives, we will voice the feelings of medicine regardless of how Dean Keeton feels. At this time, he has displayed great objectivity and fairness. He is certainly a well-respected authority in this area.

Dr. Hicks: The TMA Committee on Professional Insurance has met six times since last May. We listened to several companies about the pros and cons of setting up a captive insurance company. We decided against a captive company because of the precarious financial position in which we would be placed and the fact that reinsurance for medical malpractice insurance is almost nonexistent. We listened to many people in making the decision.

I also wanted to mention at this time that Aetna Life and Casualty Insurance Company has announced that it will not be renewing its malpractice insurance coverage after May 1, 1976 in Texas, with a few exceptions.

Mr. Autrey: For the past year I have been working strictly with professional liability insurance, and I can truthfully say that there is no active private carrier currently soliciting professional liability insurance

The Curbstone Consultation on the professional liability problem generated much interest among the TMA conference participants.

Dr. Milton Davis is a familiar face to most TMA physicians. A member of the Texas Medical Professional Liability Study Commission, Dr. Davis discussed some of the progress already made by the group.

from doctors. I get several calls every day from doctors trying to find a source of medical liability insurance.

There are three primary sources of this insurance. First are the major companies of which we have all heard. These companies are mainly maintaining their current position or lessening their growth of this type of business. They will accept applications on an individual basis. That is, they do not have an active policy of writing insurance, but they will look at specific doctors that have good records or are in lower classes. I would urge you to apply to these companies.

Secondly, there is the surplus lines market—those companies allowed to write policies although they are not licensed to do business in the state. Neither these companies nor their policies are regulated by the State Board of Insurance. The rates are higher in most cases than the JUA rates. In addition, they are not covered by the guaranty fund established a few years ago for casualty insurance companies. Therefore, if the company goes under financially, your policy would not be picked up by this fund.

The third possible source of insurance is the joint underwriting association (JUA) that was established by SB 491 in the last session of the legislature.

As of Jan 16, the JUA had accepted 417 applications from doctors for insurance. The maximum amount of coverage the JUA can write is $300,000. The JUA has also begun accepting applications for "excess layer coverage." That is, if you have $100,000/300,000 coverage from a li-

censed company (not a surplus lines company), then you can apply to the JUA for another $100,000/300,000. Currently, the sources of umbrella coverage are requiring from $200,000/600,000 to $300,000/900,000 primary coverage before you can get an umbrella coverage for a million dollars.

The JUA has also filed a new set of classifications that breaks specialties down into many subspecialties. This action was taken so that various practice types within specialties could be differentiated. This classification system has been accepted by the state insurance board.

I know of two basic sources of umbrella or excess coverage. These are a Dallas brokerage company called George F. Brown & Sons, Inc and an insurance holding company named the Crum & Forster Group.

Mr. Gray: I don't have much to add to my morning presentation on the TMA liability insurance survey. (See related news article, p 7). But I will give you a highlight of the highlights. About 95% of the physicians in this state do have coverage; 5% do not. Those that do not have coverage are split. About 9% cannot obtain coverage; 40% say the premium is too high; the rest are split between not having coverage by choice or some other reason. In terms of the companies that are writing basic coverage in the state at this time, Medical Protective covers 58% of the survey respondents followed by Aetna with 10% and Hartford with 7%. Nine companies are providing 94% of the coverage in the state.

In terms of suits or claims, 72% of the physicians have never had a suit filed against them or a claim that was discussed out of court. About 20% have had one; 6% have had two. Less than .1% of Texas physicians have had more than four suits.

Question: Once protective legislation is passed, how soon will rates go down?

Answer (Dr. Davis): We don't know. The bill SB 635 (defeated by the last legislature) is very similar to the Indiana bill in its basic philosophy. There has been no rate reduction in Indiana as yet. This is part of the reason that I have come to the conclusion that we must have some very fundamental changes in the tort law system. I don't see any lowering of the rates until we have a considerable period of time (between one and five years) of new experience.

Among our responsibilities is the need to have the good portions of the current two-year laws put into permanent law status. This refers to the accurate reporting of settlements, suits, and judgments. This has never existed before in Texas.

Dr. Hicks: I would like to add, however, that Indiana is the only state in which Medical Protective did not raise premiums this year.

Question: Is there any progress toward binding arbitration?

Answer (Dr. Webb): We have received and reviewed a lengthy research report on arbitration. We have discussed it and presented it before the full commission. We are asking for a mechanism of voluntary binding arbitration that is feasible at this point in

Texas. Although we have an arbitration law, it is not feasible because of the requirement that legal counsel be secured on the part of both parties entering into the agreement. We are asking that this requirement be deleted from the Texas arbitration law. I would add that Dean Keeton is in favor of writing a completely separate medical arbitration law. He's talking along the lines of a bill that was passed in Michigan. That bill is an acceptable forum (with reservations) for resolving disputes and if our feelings are correct, it would tend to lower costs and perhaps eliminate many of the nonmeritorious suits.

Question: Suppose we enter into such an agreement now with patients, without the backing of the law?

Answer (Dr. Webb): Right now, you can enter into such an agreement if each party has legal counsel.

Question: I am presently covered by Aetna. When should I start looking for other coverage? Also, how do I go about this?

Answer (Mr. Autrey): First of all, the date upon which we have been told they will cease renewing policies is May 1. It is possible that they could change this stand. I would, however, look for new coverage. With a good record and depending upon the type of practice, you may find something on an individual basis. If you get down to the wire, you always have the JUA to go into even on a temporary basis. (A doctor must document refusal for coverage by two commercial companies before being accepted by the JUA).

Question: What, if anything, do the physician members of the commission hope to do with the contingent fee?

Answer (Dr. Davis): I hope this is the subject the commission takes up last. First, you are dealing with the citizen's right of contract—a person can go to an attorney and enter into any type of agreement for payment which is mutually satisfactory as long as it doesn't violate any statute. We call this the doctor-patient relationship. Government programs have forced us to abrogate our position in this regard—a position that we would like to hold dear.

We also must realize that lawyers have a tremendous influence on what happens in the public forum. They dominate county court houses, commissioners' courts, and other political subdivisions because they are the ones with the combination of motivation, education, and interest to become involved in this area.

We need to approach this problem in such a way as to not violate the right of contract of the individual patient or frighten all the attorneys.

As for the contingent fee itself, we would like to get the lawyers to remove it from any portion of a judgment that might be directly earmarked for future medical care. The New Jersey Supreme Court has ruled to let the contingent fee stand in that state on a sliding scale for the portion of the judgment for pain and suffering.

Dr. Webb: I think the legislative realism of abolishing the contingent fee is nil. I agree with the concept as Dr. Davis presented it. We have established the same argument in our individual responsibility program. I

personally do not agree with the contingent fee but lawyers don't think like doctors. We don't have fee splitting or referral fees. They do. They have a valid argument that is hard to refute when they talk about the "poor patient's" right to his day in court and that their mechanism of compensation provides this avenue. The best I can hope for is some kind of scaling of the contingent fee such as exists in New Jersey.

Question: I've heard it said that if you eliminate malpractice insurance, you eliminate malpractice claims. Could every doctor in the state of Texas be covered for a basic $100,000/300,000? Otherwise, sufficient coverage keeps getting higher and higher.

Answer (Dr. Webb): Your assumption is probably correct in a situation such as Mr. Gray described where 95% of physicians have insurance. Some plaintiffs' attorneys admit this. But those same plaintiffs' attorneys will tell you that if significant numbers of doctors drop their insurance—and they view doctors as not being judgment proof individuals—they have assured me that someone among their group will see that there is a test case. When that test case occurs and some doctor's assets are wiped out, it is going to have its effect on the rest of us.

Dr. Davis: This concept of having all doctors pay the same across-the-board liability won't work unless there is a limitation of liability by statute and that may be unconstitutional. I'm inclined to predict that we will get some figure of limitation of liability and that it will be challenged in the courts. I'm not inclined to predict the

Panel members fielded questions from the audience. Pictured at top are Jeff Autrey and Dr. Don Webb. Directly above are Paul Gray and Dr. Hicks (with backs to camera).

The general problem in Texas, the TMA approach, and the timetable were some of the aspects discussed during the Curbstone Consultation.

result of that action. We have a subcommittee of the commission that feels strongly that because physicians are interdependent that they should all pay the same premium. I do not reject this. I just do not see it as problem solving.

Rates are based on actuarial figures. Right now, we have to get those figures. I'd like to mention another concept about which the plaintiffs' lawyers have written. They think we should have premiums based on income. So does organized labor. Our own attorneys reject this idea.

Comment: There's a factor each of us may have forgotten. We all know our legislator or one legislator. In our county we are going to approach our legislator to find out how he is going to vote on the issue. We're not saying he should vote everything for medicine, but we are going to find out if he plans to give us a fair hearing or vote in a block. If he doesn't plan to give us a fair hearing, we're going to work for the candidate that will listen. We may or may not succeed in this, but at least we will get a little bit of attention.

MD volunteer: the world is his office

Imagine these scenes:

- Eight women delivering babies simultaneously in the same room—on the table, on the floor, on the window sill, wherever there is a place.
- A surgeon using sun light to operate in the hospital because of the poor light in the operating room.
- Patients traveling 600 miles by foot, by donkey, by cart, and by camel just to see a doctor.
- Two obstetrics patients sleeping head to foot in each bed with two babies sleeping in a pouch at the front of each bed.
- Women refusing the IUD because it "clabbered" the milk and turned a mother's hair gray.

If you can picture yourself in the midst of such activity without panicking, you might be interested in what Dr. Jack L. Turner calls "world medicine."

A veteran of 24 volunteer physician tours in developing countries of the world, the consulting gynecologist from Fort Worth enjoys the many unusual experiences and intangible rewards that come from contributing medical assistance to foreign lands. He has served in Asia, Africa, the Caribbean, and South America. Most recently, he spent a month last summer in Solo, Indonesia with Care/Medico.

His interest in "world medicine" stems from his interest in teaching which started when he graduated from Tulane University School of Medicine in 1948. He's been engaged in some form of teaching ever since. Dr. Turner currently is an assistant clinical professor of obstetrics-gynecology at The University of Texas Southwestern Medical School at Dallas.

Long-devoted to his church and his country, Dr. Turner's innate missionary zeal became a reality in 1957 when he took his first volunteer medical tour. Yearly since he has donated a month, two months, and once five months to these efforts.

In general terms, Dr. Turner said the people of the developing countries are very similar. Their medical problems are those of the ill-clothed, ill-fed, and ill-housed. Illiteracy is high; education is hard to come by; jobs are scarce. With little or no technical and industrial skills, the people live off the land. Income is generally less than $50 per year. Opportunities to advance are few and far between. Families are large with as many as 15-25 children per woman.

"These countries are museums of pathology," he stated. "People will travel 1,000 km (600 miles) to see me because I am an American doctor. They come by any means of transportation available from foot to camel."

He continued, "Having arrived, patients wait from early morning until late in the evening. Gratitude shines in their eyes. Having trained at the Charity Hospital in New Orleans, I have seen this look many times."

The people in these countries are grateful, gracious, and gentle according to Dr. Turner. "I have never met a person in these countries that I did not like."

Dr. Turner

Medical systems

Medically speaking, these countries practice government-controlled medicine. They have no preventive medicine, no public health program, no immunization, no sanitation of water, no sewage disposal, no pasteurization. Hospitals have very basic and minimal equipment. Personnel is abundant but poorly paid. According to Dr. Turner, Indonesia has one physician per 20,000 persons; Tunisia has one for every 7,000; and Afghanistan has one for every 10,000. The figures for other such countries are similar.

"The medical and nursing staffs are eager to exchange information," Dr. Turner reported. "I never teach them; they teach me. We share experiences and techniques

on ward rounds, in the clinics, in the delivery room, in the operating room, over coffee or tea, at lunch—anytime."
Physicians work at the hospital a certain number of hours a day and for themselves in the evenings. "Luxury is not a part of a physician's life in the developing countries. I have visited in their homes which are poor by our standards. Still they are very proud," Dr. Turner stated.
In some instances his native counterparts had trained outside their own countries; in some instances they had not. In Tunisia, Dr. Turner worked with obstetrician-gynecologists trained in France, Czechoslavakia, Poland, and Bulgaria. In Brazil, no one had trained outside the country. In Indonesia, no one had been farther than Jakarta, the capital. In Afghanistan, he found physicians who had trained in Germany, Russia, and Australia. In Jamaica, they had trained in England.
"It is more difficult for those physicians who have been out of their country because they returned home to hospitals and medical schools without sophisticated equipment. I admire these physicians very much because they love their country above the economic security offered by developed countries." Dr. Turner feels that volunteer physician programs are important not only for the medical assistance offered to the population but for the postgraduate medical training offered to the native medical personnel. "We are able to train these people in their own country with their own staff, using their own equipment," he said.

Apolitical status

Dr. Turner emphasized that as a guest in the various countries he does not discuss politics. While the people respect and admire America, they do not want to be made over into the American image.

"The medical profession has a common bond of human relations that no other profession can enjoy. Nothing is more personal than one's health. There can be no higher trust," he said.
Dr. Turner pointed out that political conditions are taken into consideration before the decision to send volunteers to a particular country is made. Any potentially volatile or inflammatory situation will be avoided. If one should occur as it did with Project Hope in the past year in Ethiopia, the team will be moved, in that instance to Nigeria. Dr. Turner stressed that the word "volunteer" is understood throughout the world and that medical personnel are welcomed when no one else is tolerated.

Language

"Language barriers are no problem," Dr. Turner said. "In every country, someone speaks English. I usually work with 17-35 obstetrician-gynecologists in each country. Of this number, five will speak English. However, when the occasion demands, an interpreter is always provided. The volunteer physician will rarely give formal lectures before large groups, but an English speaking native physician or medical student is available when needed. I always make it my business to learn enough of the language to ask the essential OB-GYN questions."
He said that local physicians usually want to practice their English so they can improve. He thought it was a fun experience to see them adjust to different forms of "American English." In Solo, Indonesia, for example, Dr. Turner served with an internist from California and an anesthesiologist and surgeon from New York.
"Each of us spoke with a different accent. However, very soon the Indonesians got on our 'wave lengths' and all went well. They seemed to have the greatest difficulty with

my version—a Texas English with a Louisiana accent. It never takes anytime to overcome a language barrier—all it takes is a good smile, a warm handshake, and a genuine desire to share one's knowledge and experience with them," he explained.

Fond memories

"Each tour is a memorable experience," Dr. Turner said. "The country itself and the people there become a part of my life. The Afghan people have a history that dates back 5,000 years. Alexander the Great, Genghis Khan, Tamerlane, and Marco Polo are part of its history. Kabul, Afghanistan is the crossroads of Asia, the connection between India and China. I have walked these paths as well as the Khyber Pass of Kipling fame."

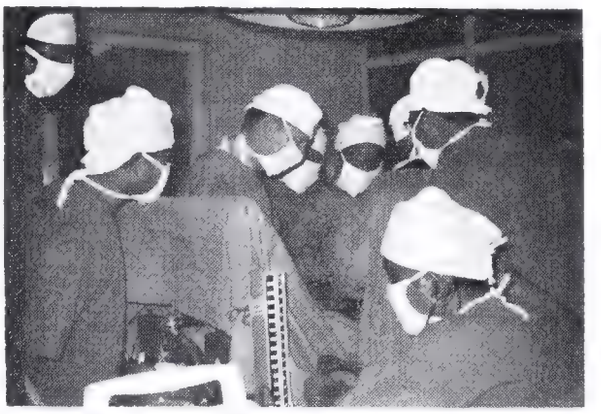
Of Brazil Dr. Turner said, "This great country with its northern Amazon territory affords the volunteer physician the opportunity to share experiences with dedicated people in medicine and at the same time explore this vast expanse of land."

He described Indonesia—an archipelago of islands over 2,000 miles in length. This country, dominated for 350 years by the Dutch, reaches out to Australia for most of its postgraduate medical training.

"My experience with Dr. Sucharjo and his staff will always be a memorable one. We kept the 260 OB-GYN beds filled with ill people," Dr. Turner remembered.

Tunisia, which boasts the ancient city of Carthage with its 3,000 years of history has 700 physicians for 5,000,000 people.

"French-speaking Arab physicians enthralled us daily with a wide range of disease including hundreds of cases of Echinococcal disease, pelvic tuberculosis, cancer of the pelvis, and obstetrical pathology beyond imagination. In our spare time we visited the ruins of Carthage and learned of the



Above are two scenes from Muwardi Hospital in Indonesia. At top, Dr. Turner is shown on rounds with the staff. Directly above he is shown in surgery. According to Dr. Turner, the Indonesian doctors were anxious to learn new techniques from the visiting Americans.

At top, Dr. Turner (left) is pictured with Dr. Richard Link (seated) of Tacoma, Wash, the senior medical officer of Care/Medico in Solo, and Dr. Sucharjo, chief of obstetrics-gynecology at the Muwardi Hospital. Directly above, Dr. Turner relaxes with the hospital staff.

history of the Punic Wars. What more could one ask for? This is where Hannibal fought the Romans on elephants. Here also is the Hand of Fatima (Mohammed's daughter)," Dr. Turner related.

Over the years, Dr. Turner has come home with a variety of items indigenous to various parts of the world such as Persian rugs, cloisonné vases from China, batik (Solo, Indonesia is the world's leading batik maker), alpaca sweaters, and semi-precious stones from Brazil.

Sponsoring groups

Dr. Turner said there are several organizations that regularly sponsor tours for physicians. These include Care/Medico, Project Hope, Direct Relief, and many denominations of religious missions. In addition, physicians may also be invited to serve as volunteer professors at various universities throughout the world.

"Physicians are constantly exposed to newsletters, journals, and magazines stating the needs for medical personnel in various countries. All it takes is to answer one of these advertisements and one is on his way," he stated.

According to Dr. Turner, one can often pick the country he chooses to serve. However, it is generally known that assistance is needed in a certain country. Spouses often accompany the physicians, but it is infrequent for children to do so because of the public health situation in developing countries. Tours are at least one month, often two, and not infrequently longer.

"Each physician has to make his own arrangements about his practice when he is away," Dr. Turner explained. "This will vary with the type of practice. In my case, I

am in solo practice. My patients have been 'trained' to have me leave for two months each year since 1957. We mail out postcards in advance of my departure so they can arrange to have their routine visits and elective surgery before or after I leave."

Dr. Turner said the local citizenry has been highly complimentary of his volunteer efforts, and his patients are proud that he donates his time in this manner. "I have found that the average American has a generous missionary feeling. Every person who has ever donated to the volunteer organizations is really a part of the tour. After all, they make it possible—there is no government funding."

Dr. Turner did point out that, as a consulting gynecologist, his practice is highly specialized. But any volunteer physician in solo practice will certainly sacrifice financially. Dr. Turner said his income declines by one-fourth with each two-month tour. He adds, however, that the "benefits I receive far outweigh the loss of income."

Financial arrangements vary according to the volunteer program. Project Hope pays the transportation to and from the country of service. It also provides room and board. (Project Hope has discontinued the hospital ship but operates land-based programs in Asia, South America, Africa, and Jamaica.) Most of the other organizations do not give financial support to the volunteers. For instance, last summer, Dr. Turner paid his airfare to and from Indonesia. While he was there, he paid a flat fee for living and eating in the staff house adjacent to the Care/Medico office. Drivers and cars were provided.

Dr. Turner suggested several "qualifications" for volunteer physicians. They should 1) enjoy people, 2) like to teach, 3) be able to accept some deprivation, 4) want to see types of disease—all organic —that can never be seen in this country, 5) be able to accept the native physician as an equal—a peer, 6) understand the patient will progress at a rate less than desirable by U S standards, and 7) not be tempted to change native physicians but be willing to demonstrate better techniques and methods.

In a nutshell, a volunteer tour is an education—exposure to history, geography, architecture, archeology, and many aspects of other cultures. But more than that, Dr. Turner said it is an experience in becoming a better doctor, a more compassionate person, a better humanitarian, and a more grateful American.

A look at California's wine country

L. A. Charpentier, MD

The beautiful Silverado Country Club in Napa, above San Francisco, was our base during our stay in California.

Wine tasting began on the first evening as we became familiar with the wines of Charles Krug Winery of St. Helena. The whites included a Blanc Fumé, a Johannisberg Reisling, and a Gewurztraminer. The Pinot Noir and Cabernet Sauvignon were outstanding among the reds. With the multi-course dinner we tasted Krug's Chablis and Zinfandel.

The following morning our tour bus headed through a light rain and mist along a highway lined with vineyards of fame and fable. Our destination was Sonoma County and the Russian River country where the first of our stops was the winery of Chateau Souverain.

A handsome new building, patterned after the old hop barns which once dotted the countryside, was tucked into a fold of the hills. After a tour of the winery we tasted their table wines including an excellent dry Chenin Blanc '73, a Johannisberg Reisling '73, and a Zinfandel '72.

The next stop was on a canyon road west of Geyserville at the J. Pedroncelli winery, one of the smaller family-owned vineyards of quality and varietal wines. A special treat here was the tasting of a Cabernet Sauvignon '68, of which none is now for sale.

After a delightful picnic lunch, we stopped at the Simi Winery of Healdsburg. This picturesque winery dates back to 1876, when the brothers Simi, Guiseppe and Petro, discovered the site. From grapes grown in the distinctive "mini-clime" of Alexander Valley, the present owners have produced wines of distinction and have helped to attain a separate appellation, the smallest in size, in California.

Dinner the same evening was prepared at the tasting room of the Mondavi Winery in Oakville. The owner and winemaster, Robert Mondavi, joined us and discussed his wines in depth.

The ambience was delightful as we dined to the music of mariachis and tasted with our first course his Fumé Blanc '72 which is a dry edition of the sweeter Sauvignon Blanc. Mondavi Pinot Noir '71 complemented the entreé. Our visit ended on a full and quiet note of pleasant satisfaction.

One morning we visited Korbel Brothers Winery, at Rio Nido, a name famous for its highly-prized champagne, but one which also adorns a full line of table wines. Starting from a picturesque former Northwestern Pacific Railroad depot which was bought for five dollars in 1935, we toured the winery to see the traditional *methode*

Editor's note: The author, a Galveston physician, is a member of TMA's Oenological Society which has sponsored several such trips to California as the one described here. Among the group's activities is an annual dinner-meeting scheduled to coincide with TMA's Annual Session. This year's dinner is scheduled for 8 pm May 6 in the Parisian Room of the Fairmont Hotel in Dallas. Reservations for the $50-per-plate dinner should be made by April 23 by contacting Dr. Jack Eidson, P O Box 696, Weatherford 76086.

Typical picturesque California winery.

champanoise which governs this wine's production.

Another highlight of the trip was our stop at Foppiano Wine Company where we were greeted by Lou Foppiano, descendant of the founder who settled here in 1894. The unique tasting room is a railroad caboose, and it was here after the tour that we tried their Zinfandel '71, Gamay Beaujolais '73, and Cabernet Sauvignon '70. Other interesting sights on the trip included the San Francisco Wine Museum and Ghirardelli Square, just to name two.

We had our last gourmet dinner and tasting at the Stanford Court Hotel. We delighted in Almadén Extra Dry Champagne with the canapes of quiche and paté, and a Wente Wente Grey Reisling with the crab ramekin fournous. To complement the entreé of roast rack of lamb, Inglenook Zinfandel was featured.

Needless to say, when departing for Texas, we were well laden with memories, sated appetites, and several bottles of chosen wines.

Grapes for Texas environments

George Ray McEachern, PhD

Texas has long been known for its diverse terrains, soils, precipitation, and temperature. Despite the contrasts, however, Texans are joining the "wine boom" and establishing trial vineyards in every section of the state.

Limiting factors

As grapes challenge the Texas environments, several significant limiting factors will be tested. The most significant problem to Texas grape culture is Pierce's disease. This bacteria-like pathogen has prevented bunch grape culture in the Gulf Coast states since early settlers attempted to grow Old World grapes. Broad-spectrum tetracyclines have given temporary suppression of the disease, but cannot be used as a cure. There are several varieties of bunch grapes which are tolerant to Pierce's disease and can be grown in East Texas, the Gulf coast region, and South Texas.

Other problems affecting grapes include cotton root rot (a soil-borne fungus), freezes and frosts, hail, and wind. But considering these factors, growers continue to plant new vineyards in hopes of producing economically-productive grapes.

Types available for Texas

There are four types of grapes which can be grown in Texas: American hybrids, French (Vitis vinifera) hybrids; French X American hybrids, and muscadines (Vitis vinifera). American hybrids are well adapted to the northern states and are classically similar to the "concord" variety. Many of these varieties were developed in Texas in the late 1800s by T. V. Munson of Denison. Several of the American hybrid varieties which are adaptable to north, central, and south Texas include Lenoir (Black Spanish), Herbemont, Champanel, Favorite, Ellen Scott, Beacon, Carman, Fredonia, and Golden Muscat.

French (Vitis vinifera) hybrids are native to Europe and are grown primarily in California. The region west of the Pecos River is an excellent environment for French varieties. Some of the most prominent varieties include Thompson seedless, French Colombard, Emerald Riesling, Chenin blanc, Barbera, Ruby Cabernet, and Petite Sirah.

French X American hybrid varieties have been developed through cross breeding and selection to develop a variety which exhibits the disease resistance of the American hybrids and the fruit quality and production of the French hybrids. Ma-

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Editor's note: Dr. McEachern is an extension horticulturist with the Texas Agricultural Extension Service at Texas A&M University in College Station. Last year he spoke to a gathering of Texas physician-oenologists regarding the suitability of grapes for Texas environments. This article is a condensation of his presentation.

Black Spanish grapes.

jor breeding programs in France, New York, Arkansas, Florida, and California have developed new French X American hybrid varieties. Several of these have performed well in north and central Texas. These include Seibel 9110, Seyve-Villard 12-375, Aurelia, Himrod, and Carolina Blackrose.

Muscadines are native to the southeastern states and very well adapted to the humid sandy areas of East Texas and the Gulf coast. Muscadines which have performed well in East Texas include Hunt, Jumbo, Cowart, Higgins, Carlos, and Magnolia.

There is only one commercial winery in the state currently producing its own grapes. However, many new plantings have been established across Texas. The Texas Agricultural Extension Service is evaluating over 100 grape varieties in various Texas locations. It is anticipated that the best varieties for each specific area of Texas can be identified through these demonstrations.

LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

INSURANCE BOARD ADOPTS RULES FOR 'NEWBORN COVERAGE'

In 1973, the legislature adopted Article 3.70-2(D) which provided that any individual or group policy of accident and sickness insurance, which provided coverage for "additional newborn children or maternity benefits must include initial coverage of the newborn infant from the moment of birth, without limitations or exclusions for congenital defects of a newborn child."

The act also included a provision that the newborn coverage from the moment of birth apply to all "policies issued or issued for delivery, renewed, extended, or amended in the State of Texas on or after January 1, 1974." The insurer was authorized to charge additional premiums which are "just and reasonable for the additional risks incurred by compliance with this act."

While the new law appeared to be clear and unambiguous, the State Board of Insurance was unsure as to when a policy was actually renewed or extended, and this uncertainty was not finally addressed by the board until the adoption of rules and regulations with respect to newborn coverage July 17, 1975 (effective Aug 1, 1975) and amended Dec 23, 1975.

Now, at last, the board has adopted rules which provide that a policy written before Jan 1, 1974 is "renewed, extended or amended" after that date if the policy:

1. Allows the insurer to renegotiate the terms of the policy after Jan 1, 1974, or;
2. Allows the insurer to adjust the premiums charged under the policy after Jan 1, 1974, and the policy continues in effect after the time such renewal could be or was accomplished.

Also, a non-cancellable and guaranteed renewable policy, written before Jan 1, 1974, is considered to be renewed, extended or amended if a rate adjustment could be accomplished after that date.

Additionally, a group policy written in conjunction with a collective bargaining agreement shall be considered to be renewed, extended or amended upon the expiration of any applicable collective bargaining agreement. If these rules are effectively enforced by the state board it will mean that almost every group insurance contract for sickness and accident coverage will provide benefits from the moment of birth, and individual contracts written in the future and those with premium rate adjustment provisions currently in force should provide the same level of benefits.

Officials with the insurance board indicate that some of the lesser known companies continue to refuse to broaden their coverage as required by Article 3.70-2(D) of the Insurance Code. Physicians and insureds who become aware of such companies who reject claims for benefits for newborns from birth should notify the State Board of Insurance.

Some officials indicate that the situation may not become finally resolved until there is an appellate court opinion holding a company liable and imposing the statutory penalties for the rejection of a valid claim.

Nevertheless, the rules and regulations of the State Board of Insurance should serve to substantially clarify the board's interpretation that companies shall be deemed to have amended outstanding policies to include this important coverage after a renewal date, a premium increase or date upon which the premium could have been increased. Policies issued after Jan 1, 1974, must contain the complete newborn coverage.

MEDICINE AND THE LAW

HOSPITALS, SURGEONS JOINTLY LIABLE FOR OPERATING ROOM NURSE NEGLIGENCE

Two Texas appellate cases, decided by different courts only two weeks apart have held that a hospital may be jointly liable with the physician if the operating room nurse is negligent in sponge counts, and the plaintiff recovers against the physician for malpractice based upon a foreign object left within the patient's body after surgery. This is an important departure from the single "captain of the ship" doctrine which has been applied in Texas for many years.

The two cases, *Worley Hospital, Inc vs Caldwell,* 529 SW2d 630, by the Court of Civil Appeals of Amarillo on Oct 31, 1975, and *Ramone vs Mani,* ___ SW2d ___, by the Eastland Court of Civil Appeals on Nov 14, 1975, have held that while the theory of the captain of the ship is still a viable doctrine in Texas and the surgeon in charge may be responsible and liable for the negligent acts of hospital employees, the hospital may also be liable for the same employees when the nurse is negligent in the performance of duties assigned by the hospital.

In both instances, the jury had found that the nurses failed to make a correct count of the sponges. It was further held that they were not the "borrowed employees" of the surgeon, but were employees of the hospital and supposedly trained for their assigned duties in the operating room.

Both opinions come to the same conclusion, citing different appellate court cases from other jurisdictions where the doctrine had previously been established that a nurse may be under the control and supervision of both the surgeon and the hospital.

In the *Worley Hospital* case, the Amarillo court cited with approval a Pennsylvania court opinion which stated:

> Hospitals, as well as the operating surgeons, owe a duty to the patient. If that duty is breached under circumstances from which a jury could reasonably conclude that the negligent party was at the same time the servant of two masters, both masters may be liable.

The Amarillo Court of Civil Appeals then held:

> Although ordinarily the control which a master can properly exercise over the conduct of the servant will prevent simultaneous service to two masters, nevertheless, Texas courts recognize that the same act may be done in the service of two masters where both have the requisite control and the act is within the scope of his service to both.

The court concluded that even though the evidence supported a finding that the surgeon himself did not fail to exercise ordinary care when examining the patient's abdomen before closing, Texas law would hold the operating surgeon to be liable for the negligence of the nurses. However, the hospital, under the circumstances of the case before the court, would also be liable for the same negligent acts of the nurse.

In the *Ramone* case, the Eastland Court of Civil Appeals also concluded that the nurses were acting as servants of the hospital, and not as borrowed servants of the physician, at the time of the incorrect sponge count.

The hospital is, therefore, liable under the doctrine of "respondeat superior."

The court described the hospital's control over and resulting responsibility for the actions of the operating room nurse in the

following manner:

> Physicians, permitted to do surgery at Hendricks (Hospital) have nothing to do with the assignment of personnel to the operating room. All of the personnel, except for the anesthesiologists, are employed directly by the hospital. Personnel may be replaced during surgery at the direction of the hospital without the consent of the surgeon. Prior to surgery, the operating room is prepared by hospital personnel, including the supplying of all equipment and supplies. In surgical procedures established by Hendricks, nurses are directed how, when and how many times to count sponges.

The Eastland court, citing a Louisiana circuit court opinion, quoted with approval the following language:

> In our opinion the counting of laparotomy squares in the instant case was not an act requiring the exercise of a particular skill or discretion acquired or developed by special training. It was an act which could have been done by an unskilled or untrained employee and it did not involve the exercise of professional judgment. We conclude that the incorrect count was not a medical mistake; it was an administrative or nonprofessional mistake from which liability on the part of the hospital can result.

The court further cited a Tennessee court opinion which held that when a nurse acts under the orders of a private physician in matters "involving professional skill and decision, she is absolved from liability for her acts." When she is acting as a result of orders not from the physician but the hospital by which she was employed, then the hospital may become liable. The Tennessee court stated:

> The selection of proper sponges was the duty of the hospital. Counting the sponges so as to see that no sponge was left in the body of the patient required no special professional skill or decision of the surgeon. Indeed, Dr. Schuler relied upon the sponge count of the nurse.

Thus, the Eastland court concluded, as did the Amarillo Court of Civil Appeals, that (1) the employees of the hospital were not the borrowed employees of the surgeon, and (2) their negligent conduct which proximately caused the damages to the plaintiff resulted in the hospital's being a joint "tort-feasor" along with the surgeon.

While these cases may be modified or reversed upon appeal to the Supreme Court of Texas, two courts of civil appeal have independently concluded that hospitals will share in the liability, along with the surgeon, for negligent acts of hospital employees while performing duties assigned to them by their employer. Even though the captain of the ship doctrine has once again been upheld, the substantial modification in that doctrine adopted by these two appellate courts serve notice on hospitals that the negligence of hospital employees will create a joint liability where negligence occurs in the performance of assigned duties over which the institution retains control and direction.

The Office of the General Counsel will follow these cases in order to report in this column future developments in this important medical-legal concept.

TMA Office of General Counsel
Sam V. Stone, Jr.

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Medicine in literature

YOUR LIFE DEPENDS ON IT, (motion picture), American Hospital Association, 1975, 28 min, sd, 16 mm.

This film presents three cases (premature baby with respiratory distress, heart attack, and abdominal aortic aneurysm rupture) and follows each from the time of arrival at the hospital until departure. The film describes the American hospital at work, and all the trained personnel necessary to care for just one patient.

PARENTERAL ALIMENTATION, (motion picture), American College of Surgeons, Surgical Film Library, Davis and Geck Distributors, 1973, 32 min, sd, color.

This film shows insertion and long-term maintenance of the subclavian vein catheter. The formulation and administration of the various nutrients solutions, management of patient, techniques to minimize infections, and metabolic complications are presented.

EAT, DRINK AND BE WARY, (motion picture), Churchill Films, 1975, 21 min, sd, 16 mm, color.

Shoppers, cooks, kids, and critics vent their views on eating habits and on processed foods which now make up much of the diet. The nutritional losses from processing and refining are explored as well as the reasons for increased use of food additives and colorings. The role of advertising in changing food habits is illustrated. The film encourages a good basic diet containing unprocessed natural foods.

BOOZERS AND USERS, (motion picture), Mac Miller/Avanti Films, Inc, 1975, 24 min, sd, color, 16 mm.

Narrated by James Franciscus, this film presents a broad spectrum of drugs. Society's existing attitudes on alcohol, nicotine, marijuana, barbiturates, amphetamines, and heroin are examined. The film inquires into the motives as well as the risks involved in drug-taking behavior.

IN THE TMA LIBRARY

Apple D J and Rabb M F: *Clinicopathologic Correlation of Ocular Disease*. St. Louis, C V Mosby Co, 1974.

Chapman J S: *Byron and the Honourable Augusta Leigh*. New Haven, Yale University Press, 1975.

Gibson G L (ed): *Infection in Hospital,* ed 2. New York, Churchill Livingstone, 1974.

Hodgman E C (ed): *Nursing Digest, 1975 Review of Medicine and Surgery*. Wakefield, Mass, Contemporary Publishing, Inc, 1975.

Holder A R: *Medical Malpractice Law*. New York, John Wiley and Sons, 1975.

Magee J H: *Index of Suspicion in Treatable Diseases*. Philadelphia, Lea and Febiger, 1975.

Kohler P O and Ross G T (eds): *Diagnosis and Treatment of Pituitary Tumors,* New York, American Elsevier Publishing Co, 1973.

Low A A: *Mental Health Through Will-training,* ed 19. Boston, Christopher Publishing, 1974.

Payne W S, and Olsen A M: *The Esophagus*. Philadelphia, Lea and Febiger, 1974.

Medical Newsmakers

A retired Amarillo physician, DR. E. K. JONES, has been appointed to the College of Santa Fe's Board of Trustees. Dr. Jones was one of four recently appointed to the college's 16-member governing board. Dr. Jones, a past president of the Potter-Randall County Medical Society and the Texas Society of Internal Medicine, now resides in Santa Fe, NM, with his wife.

DR. M. T. JENKINS, chairman of the Department of Anesthesiology at The University of Texas Health Science Center at Dallas, has been elected to a three-year term on the Coordinating Council on Medical Education, one of three representatives from the Council of Medical Specialty Societies. The CCME is composed of representatives from the American Board of Medical Specialties, the American Hospital Association, the Association of American Medical Colleges, the Council of Medical Specialty Societies, and the American Medical Association.

DAVID K. FERGUSON, former director of the Regional Medical Program of Texas, has assumed the position of director of government marketing for the mid-continent region for Health Applications Systems Inc, a health industry service organization.

Joining the Project Hope medical education staff in Maceio, Brazil as program director is DR. HERMAN W. ANDERSON of Fort Worth. Dr. Anderson has had a private practice in pediatrics in the Fort Worth area for over 20 years. Most recently he has worked with the Hospital for Sick Children in Toronto, Canada. Maceio is the second city in northeast Brazil to have a Project Hope program. In 1972, Project Hope began a similar mission in Natal, Brazil.

Following 20 years of research, DR. W. DOAK BLASSINGAME of Denison has written a book called *The Blassingame Families*. Published by the University Press, Wolfe City, Tex, the illustrated volume traces families of this name, including Blasingame, Blasingham, Blasingim, and other similar names from the 17th century to the present time. Over 570 families are detailed, and results of searches for records in England and France are featured.

Dr. Jones

DR. LAMONT JENNINGS of Galveston was recently presented the Caldwell Award, by the Texas Society of Pathologists. The gold medal is awarded annually to a distinguished medical scientist of Texas whose long and distinguished service to pathology in the state warrants commendation. New officers of the society, elected at the January annual meeting, include DR. JAMES C. STINSON of Temple, president; DR. MARC GARZA of Dallas, president-elect; DR. JOHN MILAM of Houston, vice president; and DR. JOHN WEBB of Houston, secretary-treasurer.

"I'd like to get my hand on the wise guy who keeps writing 'Respectfully submitted' on all the specimens."

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

RAY K. DAILY
Houston, 1891-1975

HERSHALL LaFORGE
Uvalde, 1890-1975

RAUL DE LA GARZA
Laredo, 1898-1975

P. B. GUTTMAN
Corpus Christi, 1922-1975

GEORGE R. HERRMANN
Del Rio, 1894-1975

E. A. JOHNSON
Waco, 1900-1975

P. M. KASSNER
Corpus Christi, 1940-1975

H. K. KIBBIE
Fort Worth, 1903-1975

C. E. PAYNE, SR.
Lubbock, 1905-1975

C. S. E. TOUZEL
Fort Worth, 1903-1975

S. H. WILLS
Houston, 1899-1975

J. R. WISE
Fort Worth, 1908-1975

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. Ray K. Daily

Dr. Ray K. Daily, an ophthalmologist and former president of the Houston school board, died Nov 28, 1975.

Dr. Daily, 84, was a former vice-president of the American Academy of Ophthalmology and Otolaryngology, a past president of the Houston Eye, Ear, Nose, and Throat Society, and a recipient of the Ashbel Smith Award (1971). In 1964, she served as the official AMA representative to the Second Congress of the European Society of Ophthalmology, held in Vienna. Additionally, she was the author and co-author of numerous publications.

The physician was born in Vilna, the ancient capital of Lithuania. She moved to Denison, Tex, as a child. She was a graduate of The University of Texas Medical Branch, Galveston (1913). Her internship was in Philadelphia. She also did postgraduate work in Vienna.

She came to Houston in 1914, and shared an ophthalmology practice with her husband, the late Dr. Louis Daily. Their son later joined her office.

Dr. Daily was an honorary member of Texas Medical Association. Her other professional memberships included the American College of Surgeons, French Ophthalmological Society, Oxford Ophthalmological Congress, Pan American Ophthalmological Association, American Medical Association, and Harris County Medical Society.

Surviving Dr. Daily are her son, Dr. Louis Daily, Jr., and grandchildren, Evan Daily and Collin Daily, all of Houston.

Dr. Hershall LaForge

Dr. Hershall LaForge, 84, died Sept 25, 1975.

Dr. LaForge had practiced in Uvalde since 1940. In addition to his practice, he was president of the board of Southwest Texas Junior College, Uvalde.

He was a native of Bearden, Ark, and a graduate of Baylor College of Medicine (1915). Before moving to Uvalde, Dr. LaForge practiced in Kingsbury and George West. His practice was interrupted by service in World War I as a member of the Medical Corps, US Army.

Dr. LaForge was an honorary member of Texas Medical Association and a past president of the Bee-Live Oak-McMullen County and Nine Counties (Medina-Uvalde-Maverick-Valverde-Edwards-Real-Kinney-Terrell-Zavala) medical societies. He also was a member of the American Medical Association.

He was a lay member of the United Methodist Church, a 50-year member of the Masonic Lodge, and a member of the George West Rotary Club and the Uvalde Lions Club. He was selected as Uvalde Chamber of Commerce Citizen of the Year for 1963.

Surviving are his wife, Irma Williams LaForge, Uvalde; two brothers; two sisters and four grandsons.

Dr. LaForge

Dr. de la Garza

Dr. Raul de la Garza

Dr. Raul de la Garza, 75, who practiced medicine more than 50 years in Laredo, died Aug 28, 1975.

Dr. de la Garza was a native of Laredo. He was graduated from The University of Texas and Rush Medical College, University of Chicago.

He interned at Presbyterian and St. Luke's hospitals in Chicago and directed the Chicago Venereal Diseases Clinic.

Upon returning to Laredo, Dr. de la Garza became a US Public Health Service consultant and devoted much time to the Laredo-Webb County clinics, especially to the clinic for indigents.

Dr. Herrmann

Dr. Johnson

Dr. de la Garza was elected to honorary membership in Texas Medical Association in 1973. He also was a member of the Webb-Zapata-Jim Hogg County Medical Society and the American Medical Association.
Dr. de la Garza's wife, Hilaria Trevino de la Garza, preceded him in death in July. Surviving are a sister, Francisca de la Garza and numerous nieces and nephews.

Dr. P. B. Guttman

Dr. Paul Boyd Guttman, Corpus Christi, died Aug 28, 1975, at the age of 52.
Dr. Guttman was a native of Bicknell, Ind. He attended Texas A&I University, Kingsville, and Tulane University, New Orleans. He received his MD degree from Tulane University Medical School. During 1946-47, Dr. Guttman was an intern at Southern Baptist Hospital, also in New Orleans.
Dr. Guttman opened his practice in Corpus Christi in 1947. From 1951-53, his practice was interrupted by service in the US Navy.
In addition to the American Medical Association, he was a member of the American Academy of Family Physicians, the Nueces County Medical Society, and Phi Chi medical fraternity. He also was a member of the Corpus Christi Yacht Club.
Dr. Guttman is survived by his wife, Norma Stitt Guttman, Corpus Christi; daughter, Mrs. William N. Latham, Houston; and son, Ralph Guttman, Cotulla, Tex.

Dr. George R. Herrmann

Dr. George Rudolph Herrmann, famed cardiologist and Ashbel Smith professor in internal medicine at The University of Texas Medical Branch, died Dec 2, 1975. He was 81 years of age.
Dr. Herrmann was the recipient of numerous international honors, including the TMA and AMA Distinguished Service awards. He had held many academic positions and had published three textbooks, as well as more than 400 scientific articles and reports.
Dr. Herrmann also was a recipient of the Civilian Service Medal of the US Army Medical Corps, the Medal for Distinguished Achievement of the American Heart Association, and the first Honorary Jeweled Key Award of the American College of Cardiology. Also, he served as a consultant to the Surgeon Generals and the National Research Council.
During World War II, Dr. Herrmann was a member of the defense department's five-man committee for the evaluation and recommendation of essential drugs for the armed forces.
The doctor was a native of Fort Wayne, Ind, and a graduate of the University of Michigan (1916) and the University of Michigan Medical School (1918). He also attended the University of Michigan graduate school, earning the MS and PhD degrees.
He served his internship at Peter Bent Brigham Hospital, Boston (1918-19), and his residency at Robert Abbott Barnes Hospital, St. Louis (1919-21). He was a member of the faculty of Tulane University School of Medicine, New Orleans, before moving to Galveston in 1931.
Surviving Dr. Herrmann are his wife, Anna Williams Herrmann, Del Rio; a son, Dr. George H. C. Herrmann, Del Rio; two daughters, Dr. Georgeanna Herrmann Greer, San Antonio, and Dr. Gretchen S. Herrmann Runge, Austin; eight grandchildren and one great-grandchild.

Dr. E. A. Johnson

Waco physician, Dr. Ernest Anderson Johnson, died Oct 18, 1975. He was 76 years of age.
He was on the staffs of Providence and Hillcrest Baptist hospitals, Waco; Whitney Hospital, Whitney; Grant-Buie Hospital, Hillsboro; Mexia Memorial and Mexia State School hospitals, Mexia; and Teague General Hospital, Teague. He also was consultant for the Veterans Administration outpatient clinic, Waco.
Dr. Johnson was a native of Timpson, Tex. He was graduated from The University of Texas Medical Branch, Galveston, in 1924.

His internship was in Oakland, Calif. He also studied at the Manhattan Eye, Ear, and Throat Hospital, New York. In 1927, Dr. Johnson became a general practitioner in Jasper, Tex.
In 1929, following postgraduate work in EENT at Charity Hospital, New Orleans, he opened his practice in Waco.
Dr. Johnson's professional memberships included the McLennan County Medical Society, American Association of Ophthalmology, Southern Medical Association, American Medical Association, and American Medical Association of Vienna. He was an honorary member of Texas Medical Association.
He also was a member of the Young Men's Christian Association (YMCA), the Ridgewood Country Club, the Baylor-Waco Foundation, Baylor Bear Club, Texas Longhorn Club and the Waco Gun Club. He was active in the Waco Symphony and the Waco Civic Theatre.
Surviving are his wife, Del Gaeke Johnson, Waco; two sons, Jan Johnson, Dallas, and Larry Johnson, China Lake, Calif; brother, F.O.B. Johnson, Arlington; and one granddaughter.

Dr. P. M. Kassner

Dr. Phillip Maurice Kassner, Corpus Christi internist, died Oct 16, 1975, at the age of 35.
Cause of death was an airplane accident, in which Dr. Kassner's wife, Carol Louise Deffenbaugh Kassner, also died.
Dr. Kassner was a native of Corpus Christi. He graduated from Sam Houston State University (1964) and The University of Texas Medical Branch, Galveston (1968). His internship was at Brackenridge Hospital, Austin. He served residencies at The University of Texas Medical Branch and at Baylor College of Medicine.
A former member of the US Army, Dr. Kassner served in France two years.
His professional memberships included the Nueces County Medical Society and American Medical Association.
Dr. Kassner is survived by his parents, Mr. and Mrs. Frank Kassner; brothers, Mervin Kassner, Rockville, Md; Milton Kassner, Fort Riley, Kan; and Gilbert Kassner, Corpus Christi; and sisters, Mrs. Virgil Maikoetter, Taft, Tex; Mrs. Illene Richter, Livermore, Calif; and Mrs. Linda Taylor, Vivian, La.

Dr. Kassner

Dr. Payne

Dr. H. K. Kibbie

Dr. Horace Kent Kibbie, 72, Fort Worth physician, died Oct 19, 1975.
Dr. Kibbie, an internist, formerly was physician for employees of the city of Fort Worth, and for employees of the Santa Fe Railroad. He retired from his medical practice in August.
He was a graduate of The University of Texas (1925) and the University of Louisville School of Medicine in Louisville, Ky (1932). His internship was at Scott and White Memorial Hospital, Temple (1932-33).
Prior to entering medical practice, Dr. Kibbie was a professional baseball player. He played for the Boston Braves in 1926, and for the Fort Worth Cats in 1927 and 1928.
Dr. Kibbie's professional memberships included the Tarrant County Medical Society, the American Medical Association, and the American Academy of Family Physicians.
He was a veteran of World War II.
Surviving are his wife, Mildred Daufarth Kibbie; a son, Kent D. Kibbie, and two grandchildren, all of Fort Worth.

Dr. C. E. Payne, Sr.

Dr. Clifford Earl Payne, Sr., 70, died of a heart attack Oct 22, 1975. He was a resident of Lubbock.
At the time of his death, Dr. Payne was on the staffs of St. Mary of the Plains and Methodist hospitals, Lubbock. He also had a private practice.
Dr. Payne, a native of Arlington, Tex, was a graduate of Baylor College of Medicine (1933). His internship and residency were at Parkland Memorial Hospital, Dallas. He also did postgraduate work at Lahey Clinic, Boston, and at the Mayo Graduate School of Medicine, Rochester, Minn.
He practiced in Littlefield (1934-51) before moving to Lubbock, where he was associat-

Dr. Touzel

Dr. Wise

ed with Medical Arts Clinic and Taylor Hospital, and was one of the founders of University Hospital.
He was a diplomate of the American Board of Abdominal Surgery, a fellow of the International College of Surgeons, a charter fellow of the American Academy of Family Physicians and a fellow of the American Geriatric Society.
He was a member of the Lubbock-Crosby-Garza County Medical Society and the American Medical Association, and a past secretary and president of the Lamb-Bailey-Hockley-Cochran County Medical Society.
Dr. Payne also was a former president of both the YMCA board and the Lubbock Council on Alcoholism.
He is survived by his wife, Ernestine Shotwell Payne; and one son, Clifford Earl Payne, Jr., both of Lubbock.

Dr. C. S. E. Touzel

Dr. Cecil Stuart Eugene Touzel, a past president of the Tarrant County Medical Society, died Nov 24, 1975. He was 72 years of age.
Dr. Touzel retired from practice in May, 1975. He had been chief of staff of Harris, All Saints Episcopal, St. Joseph and John Peter Smith hospitals, Fort Worth.
A native of Ontario, Canada, Dr. Touzel was graduated from medical school in Montreal in 1928. He did graduate work in Montreal and at Vanderbilt University Hospital, Nashville, Tenn.
Dr. Touzel was a past president of the Tarrant County Pediatrics Society, the Texas Pediatric Society, and the Fort Worth Academy of Medicine. He also was a member of the American Medical Association.
In 1966, he was the recipient of the Gold-Headed Cane Award, the Tarrant County Medical Society's accolade for outstanding physicians.
Surviving are a son, Thomas John Touzel, Fort Worth; four daughters, Mrs. Gwen Hamilton, Manhasset, NY; Matilda Touzel and Jane Touzel, both of Montreal; and Cathy Touzel of Bedford, Tex; two brothers, three sisters, and six grandchildren.

Dr. S. H. Wills

Dr. Seward Haff Wills, 76, died Nov 27, 1975, at Waller, Tex. He had been a Houston resident since 1934.
A native of New Jersey, Dr. Wills attended Morris Academy, Morristown, NJ, and Rutgers College, New Brunswick, NJ. He graduated from Tulane University School of Medicine, New Orleans, in 1925.
The obstetrician-gynecologist was an honorary member of Texas Medical Association. He also was a member of the Harris County Medical Society and the American Medical Association. Other professional memberships included the American College of Obstetricians and Gynecologists, American College of Surgeons, and the Central Association of Obstetricians and Gynecologists. He was a veteran of World Wars I and II.
Survivors include his daughter, Mrs. Florence Wills Ellis, of Houston; brothers, Turner Wills, of Stanhope, NJ, and John Wills, of Florida; and two granddaughters, both of Houston.

Dr. J. R. Wise, Sr.

Dr. Joe Robert Wise, Sr., 66, a Fort Worth physician and surgeon, died Oct 25, 1975.
Dr. Wise had practiced in Fort Worth since 1935. He was a native of Daingerfield, Tex.
He was a graduate of The University of Texas (1931) and The University of Texas Medical Branch, Galveston (1933). His internship was at John Sealy Hospital, Galveston, and his residency was at W. I. Cook Children's Hospital, Fort Worth.
The doctor was a fellow of the American College of Surgeons, and a member of the American Medical Association and the Tarrant County Medical Society.
Survivors include his wife, Madge Brelsford Wise of Fort Worth; two sons, Joe R. Wise, Jr., of Bangor, Me, and Harold B. Wise of Austin; a sister, Mrs. Mary Elizabeth Hampton of Fort Worth, and five grandchildren.

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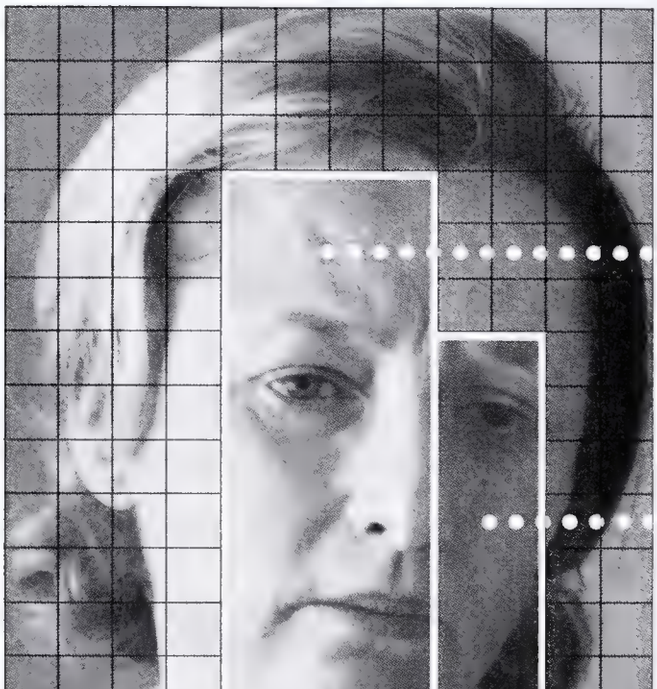

Predominant psychoneurotic anxiety

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

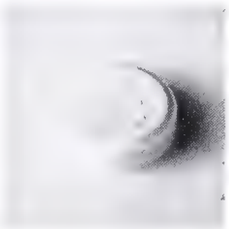
Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in freq and/or severity of grand mal seizure require increased dosage of standar convulsant medication; abrupt witho may be associated with temporary ir crease in frequency and/or severity seizures. Advise against simultaneou gestion of alcohol and other CNS dep sants. Withdrawal symptoms (simila those with barbiturates and alcohol) occurred following abrupt discontin (convulsions, tremor, abdominal an cle cramps, vomiting and sweating). addiction-prone individuals under c

respond to one

According to her major
nptoms, she is a psychoneu-
ic patient with severe
xiety. But according to the
scription she gives of her
lings, part of the problem
y sound like depression.
is is because her problem,
hough primarily one of ex-
sive anxiety, is often accom-
nied by depressive symptom-
ology. Valium (diazepam)
n provide relief for both—as
excessive anxiety is re-
ved, the depressive symp-
ns associated with it are also
en relieved.

There are other advan-
es in using Valium for the
nagement of psychoneu-
ic anxiety with secondary
pressive symptoms: the
chotherapeutic effect of
lium is pronounced and
id. This means that im-
vement is usually apparent
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.



Valium®
(diazepam) (IV)

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

veillance because of their predisposi-
n to habituation and dependence. In
gnancy, lactation or women of child-
aring age, weigh potential benefit
inst possible hazard.

cautions: If combined with other psy-
otropics or anticonvulsants, consider
efully pharmacology of agents em-
yed; drugs such as phenothiazines,
cotics, barbiturates, MAO inhibitors
l other antidepressants may potentiate
action. Usual precautions indicated in
ients severely depressed, or with latent
pression, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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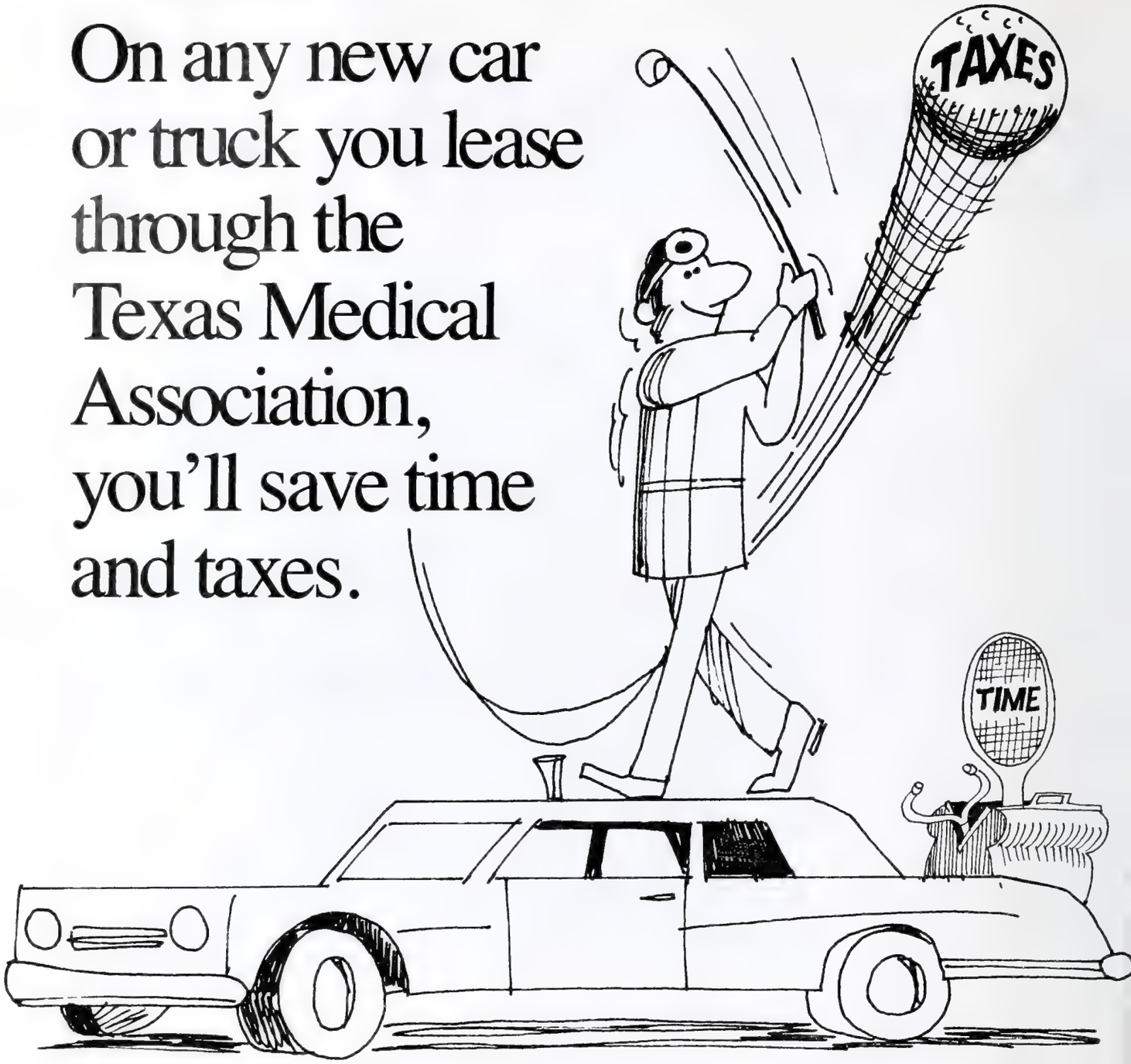

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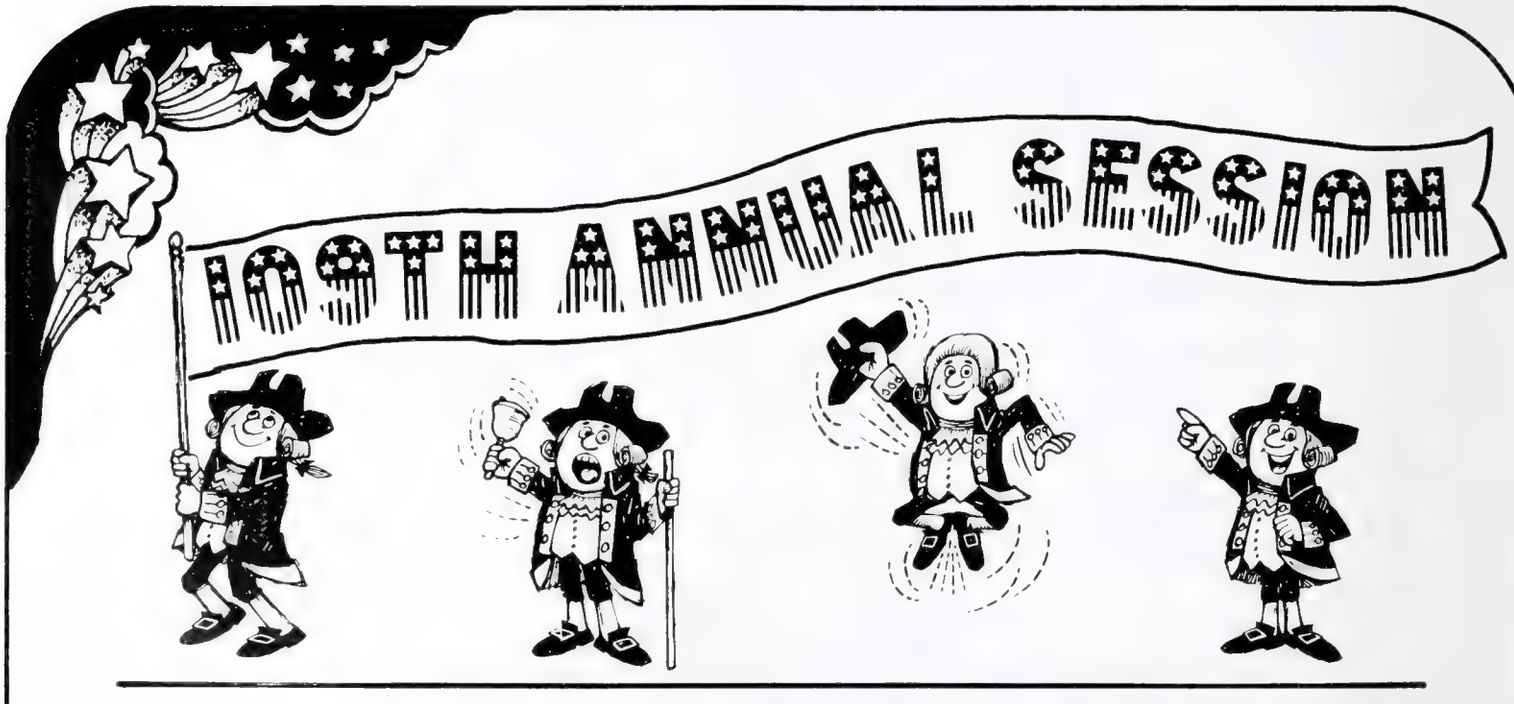

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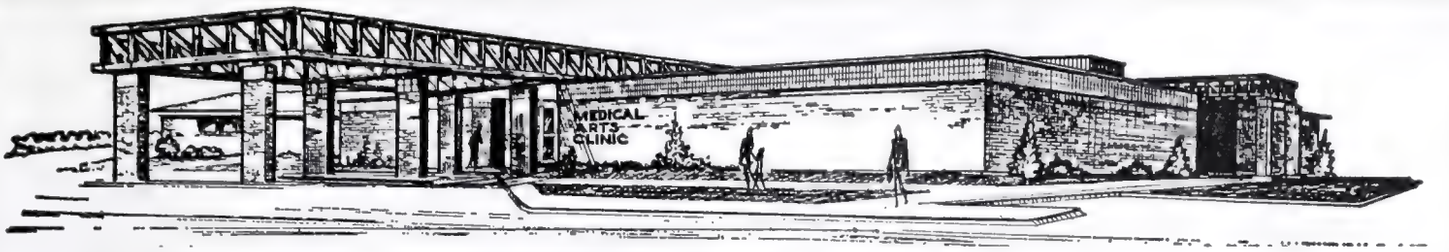

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WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

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Editorials

INTERNATIONAL MEDICAL CARE DELIVERY SYSTEMS

Many physicians believe that the government will soon impose a new system of medical practice on America. The general population will be largely ignorant of this occurrence until it takes place; therefore, it is imperative that the medical community take note and try to help mold a system that will result in medical progress rather than regression.

A knowledge of the problems and pitfalls of other medical care delivery systems might aid us in counseling our legislators and the voting public in solving some of our own health care delivery problems.

The world's health care problems fall into two broad categories: those of the developed or industrialized nations, and those of the so-called developing nations.

Problems of the developed nations are exemplified by several European countries that have accepted the efforts of governmental planning agencies and subsidization of care.

In the United Kingdom for example, the National Health Service (NHS) is charged with providing comprehensive health care and improving the physical and mental health of the people.

The NHS became operational in 1948; its 26 years of operation have been fraught with problems. Many adjustments were required, and in April 1974 a massive restructuring was carried out to obtain greater managerial efficiency and a better balance between the hospital-based specialists and community family practitioners.[2] Restructuring has not been entirely successful. For example, consultants were refused a pay raise and were offered contracts stipulating some loss of state salary if they spent any time in private practice. The consultants retaliated by limiting their work to 38 hours per week, which was their contractual requirement. Previously, they had worked about 20 additional hours per week without pay.

The NHS founders believed that universal care would reduce illness and the demand for treatment. In fact, the demand for state-provided benefits has proved limitless. The founders of the NHS estimated its 1974 cost at $400 million; in fact it is nearly 20 times that amount.[5]

A practicing British consultant stated that the NHS is in trouble because it has fallen into the hands of the politicians. Further, he says that the NHS structure is inflexible and that its chain of command is more rigid than that of the army. He emphasizes, however, that urgent cases are handled immediately and handled quite well, but that the waiting list for non-urgent cases lengthens each day.

Many of Great Britain's 2,300 hospitals are more than 100 years old and unsuitable for patient care (one five-floor hospital has no elevator). In 1970, 27% of all known food poisoning took place in hospitals. Only 40 new hospitals have been built since World War II.

The NHS has falsely economized by keeping its physicians, nurses, and others chronically underpaid. Until now, this was possible because the hallmark of these professionals always has been dedication to their work rather than to the cash it put in their pockets.[5]

Efforts to equalize income in the medical profession mean that now the general practitioner may earn as much as the hospital consultant. The long-term effect on training of specialists is easy to see. In spite of this, in 1974 no new British-trained doctors entered general practice.[5] An average of 300 British-trained doctors leave the country each year.

In the past 15 years the NHS has deteriorated, the morale has deteriorated, politicians have had more and more influence, and the funds have been progressively cut back. Many British physicians feel that after a quarter cen-

tury of experimentation, it is imperative that the medical profession regain control of the country's health service.

The problems of medical care in the underdeveloped nations are staggering and perhaps have little application in our highly developed society. However, we should have some concept of these problems.

An underdeveloped nation is one defined as having limited economic resources, paucity of educational services and trained manpower, excessive fertility levels, malnutrition, a common disease pattern, and an entrenched conservative peasant agricultural society.[4] Seventy percent of the world's population lives in this type society. Half the world's population may not see a doctor from the time they are born until they die.[3] Although the underdeveloped countries have only 12.5% of the world's money, they have 86% of its births. This tremendous population growth causes the gap between the developed and underdeveloped nations to widen continually. In a health center in India, one doctor was seeing 700 patients in a morning.[7] Obviously, the only long-term solution to the vast problems in these areas is effective population control. Malnutrition is a basic medical problem and gets worse instead of better. Communicable and vector-borne diseases are major problems. Many of the diseases that occur in these regions could be eliminated by immunization programs and prophylactic drug regimens. Others would succumb to simple improvements in environmental sanitation and water supply. Yet, under government controlled medicine and public health, these basic problems are not corrected.

From studying these two types of international medical systems, we can draw some conclusions applicable to our own society:

1. Ambitious medical care systems are established by politicians, but subsequent legislation to fund the system adequately is not forthcoming. In Great Britain, for example, funds have been progressively cut.

2. The medical system is overutilized in every socialized system, and overuse is difficult to control. It is not politically expedient for the legislator to limit his constituent's access to the medical system. Long waiting periods, escalating costs, and eventually near bankruptcy result.

3. When the state employs physicians, it tries to make their compensation equal to that of other workers. Government salaries do not even keep pace with inflation; also, compensation for additional training, added skills, and difficulty of task performed is neglected.

4. Government control siphons medical care dollars into the bureaucracy, reducing the amount available for direct care.

5. Free medical care is never available. If the individual does not have to pay for his medical care directly, he pays through higher taxes and bureaucratic expenses.

6. The amount of uncompensated work done by the average physician is seldom considered by politicians or by the press when planning new medical systems. The politician never accepts the responsibility when costs far exceed his conservative estimates; the medical profession becomes the scapegoat.

Every physician has a responsibility to learn all he can about the problems facing American medicine, and to tell his legislators what he thinks. Eventually, we may evolve a system that provides excellent care for every patient without bankrupting our nation, causing rampant inflation, or destroying our medical system.

W. J. Nelson, MD, El Paso; W. H. Mosberg, Jr., MD, Baltimore.

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Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct nontherapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D. C. 20005

Medicaid will continue, with our help

The Texas State Board of Public Welfare has appropriated funds from the department's "earned federal funds" account to settle the Medicaid premium deficit this year. An even bigger deficit may develop the next fiscal year (beginning September 1), and physicians are asked to help keep the Medicaid program both serviceable and solvent.

What happened this year? The general public wants to limit welfare appropriations, and the legislature listens. As a result of public attitudes combined with inflation, appropriations will not support continuation of the Medicaid program at 1974 and 1975 levels.

Neither physicians nor hospitals are paid what they deserve if they participate in the Medicaid program, and some physicians no longer accept Medicaid patients. In the natural course of events, patients who can't obtain treatment in doctors' offices and clinics seek treatment in hospital emergency rooms or even as hospital inpatients. Either way, costs are higher.

The TMA Executive Board agreed that the transfer of funds was necessary; Medicaid basically is a good program that is administered within our state to help provide medical care for people who are medically indigent.

Physicians alone cannot solve the whole problem, but we can help. The Executive Board specifically requested that physicians who have curtailed or discontinued service to Medicaid patients try again; it is important that care be available in offices and clinics. Physicians and other providers also are asked to voluntarily shave all services to those essential for patient safety in this time of financial crunch. When it comes to deciding which services are necessary for the patient's safety, no group can do this quite as well as the physicians; certainly such decisions should not be based on administrative restrictions.

For its part, the Department of Public Welfare has pledged to ferret out the relatively few recipients who might abuse the program and be guilty of recipient overutilization, and to strengthen utilization review mechanisms in order to fulfill their firm statutory mandate to determine that medical services are necessary before allowing reimbursement.

Physician representatives on the Medical Care Advisory Committee of the Department of Public Welfare, chaired by Dr. Milton V. Davis, Dallas; the Association's Council on Tax-Financed Health Care Programs, headed by Dr. A. Rex Kirkley, Belton; and the Executive Board join in urging every physician to do his part to maintain the effectiveness of the Medicaid program while solutions to its problems are being worked out. We urge that physicians continue serving Medicaid patients, and cooperate at the local level to improve and strengthen the utilization review mechanism. The real goal, as always, is to see that all the people of Texas have the finest medical care possible.

Nym L. Barker, MD, President, Texas Medical Association.

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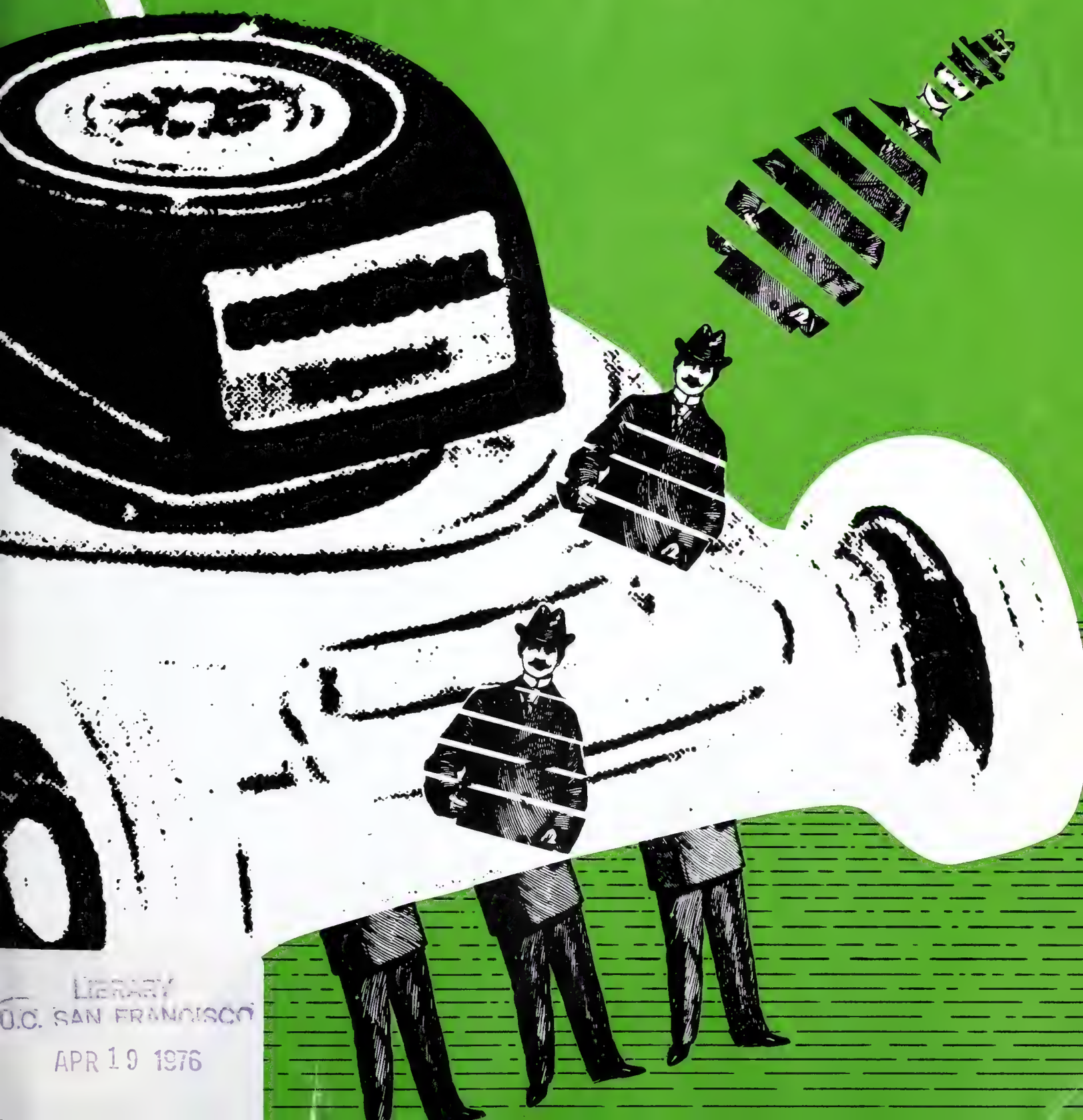
Annual Session: the Dallas story
Physical loss: adolescents don't react like adults
Gray scale ultrasonography in abdominal diagnosis
Induced abortion in Texas



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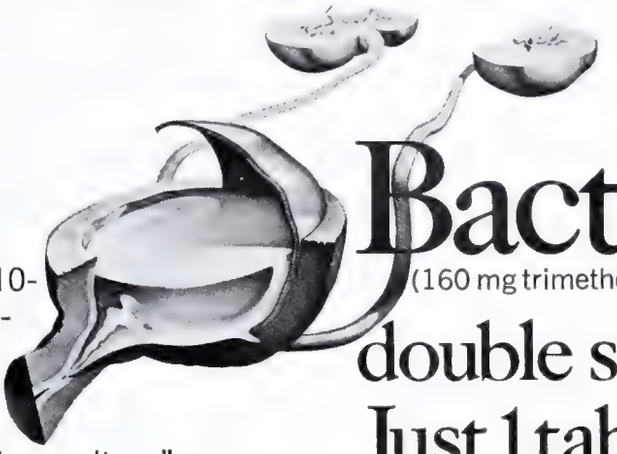

In a multicenter, double-blind study of patients with chronic or frequently recurrent urinary tract infection, Bactrim 10-day therapy outperformed ampicillin 10-day therapy by 27.2%, when comparing patients who maintained clear cultures for eight weeks. Criterion for "clear culture" was 1000 or fewer organisms/ml of urine.

While adverse reactions were mild (*e.g.*, nausea, rash), more serious reactions can occur with these drugs. See manufacturers' product information for complete listing.

Note: Bactrim single strength tablets were used in these clinical trials. However, studies have established the bioequivalency of Bactrim DS with the single strength tablets.

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

double strength tablets Just 1 tablet B.I.D.

Bactrim™

(80 mg trimethoprim and 400 mg sulfamethoxazole)

2 tablets B.I.D.

For chronic or frequently recurrent cystitis and pyelonephritis due to susceptible organisms.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections.

The recommended quantitative disc susceptibility method (*Federal Register*, 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **Data are insufficient to recommend use in infants and children under 12.**

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) every 24 hours
Below 15	Use not recommended

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole — bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.

Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole; fruit-licorice flavored — bottles of 16 oz (1 pint).

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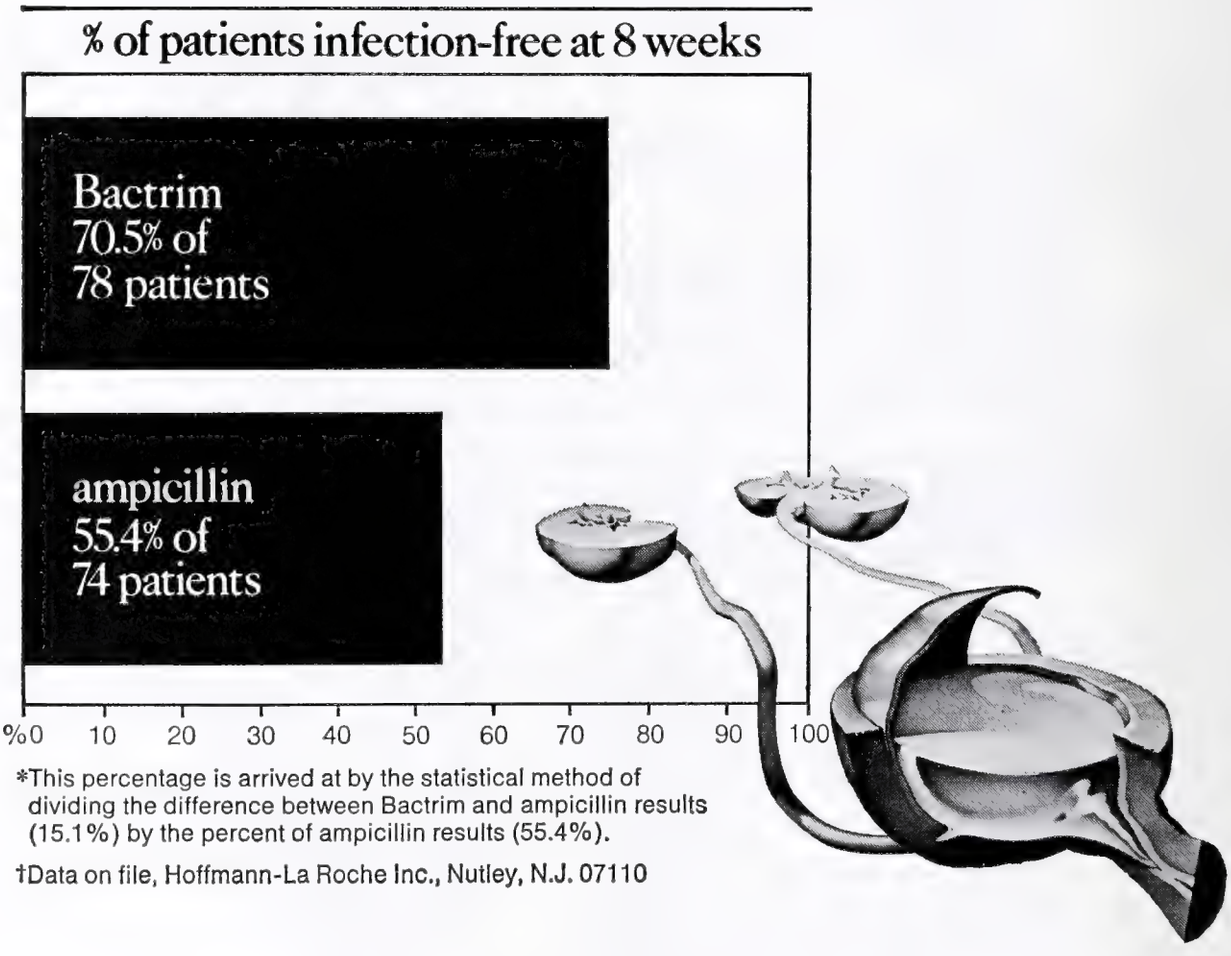
Bactrim™ was 27.2%* more effective than ampicillin in keeping patients infection-free for 8 weeks.†



*This percentage is arrived at by the statistical method of dividing the difference between Bactrim and ampicillin results (15.1%) by the percent of ampicillin results (55.4%).

†Data on file, Hoffmann-La Roche Inc., Nutley, N.J. 07110

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

double strength tablets

Just 1 tablet B.I.D.

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ON THE COVER

Power lawn mowers are capable of flinging objects with a velocity at least as great as that of a bullet. Although they are less common than lacerations and amputations, missile injuries caused by power lawn mowers are somewhat similar to gunshot wounds, and should be handled with great caution.

NEXT MONTH

Articles scheduled for May are on surgery of the facial nerve, preoperative and postoperative assessment of bronchogenic carcinoma, conjugal asymptomatic neurosyphilis, kidney stones, and the electromyography machine mystique.

Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct non-therapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D. C. 20005

NEWS

TMA professional liability survey results released

The premise that the professional liability insurance crisis in Texas is adversely affecting the availability and the cost of health care services for patients has been documented by the Texas Medical Association. Survey results released in mid-March indicate that one of every two Texas private physicians responding to the questionnaire will limit services as a result of the malpractice situation.

Also outstanding among the findings of the 1975 TMA Professional Liability Insurance Survey are (1) that malpractice suits in the state have quadrupled since 1971, and (2) the amounts awarded by juries have risen 500% in the same period.

In addition to the public dissemination of the report, TMA has presented the survey results and analysis to the Texas Medical Liability Study Commission for its use in the formulation of proposed legislative remedies to the crisis. The commission had cited the lack of documentation as a major stumbling block to resolving the professional liability insurance problem.

Increase of suits

Nationwide, one of the basic characteristics of the malpractice crisis is the rapidly increasing number of claims or suits in the field. The TMA survey shows that Texas has not escaped the alarming increase in frequency of professional liability insurance claims and suits.

Of all the respondents to the survey, one out of every 3.5 physicians (28%) have had a claim or suit filed against them at some time in their professional career. For the larger specialties, this percentage varied widely; for example, 15% for pediatricians; 49% for orthopedic surgeons; 54% for neurosurgeons. It is significant that one-third of the physicians engaged in family practice have had a claim or suit filed against them. Of all the claims or suits filed against the respondent physicians, 60% have been filed since 1972; 35% in 1973 and 1974 alone; and 16% in the first eight months of 1975.

The survey information further indicates that such items as medical school, years in practice, or specialty board certification have little affect on whether a physician has had a suit or claim.

Increased severity

The malpractice crisis has also been marked by the steep escalation in the severity of claims or suits. The TMA survey shows a definite upward trend in the dollar amounts being sought in Texas since 1965. The percentage of all claims or suits seeking $100,000 to $500,000 has jumped from 38% in 1965 to 43% in 1975. In 1965, only 2% of all claims or suits were seeking over $1 million; however, by 1975 the percentage had increased to 13.1%. Logically, there has been a decrease in the percentage of suits or claims asking for less than $100,000.

Disposition of claims or suits have a bearing on the total crisis picture in view of the increased amounts of awards being sought. For the year 1965 in Texas, 48% of all claims reported were settled out of court; 26% were dropped or dismissed by the claimant; 17% were tried with the physician found to have rendered standard care; 2% were tried with the physician found negligent; 2% are still pending, and 2% have yet to be disposed of.

Of the claims or suits reported in 1974, 19% have been settled; 14% have been dropped or dismissed, 3% were tried with 2% of these won by the physician and 1% by claimant. Still pending are 61% of the 1974 claims or suits. During the first six months of 1975, 6% of the reported claims or suits were settled; 7% were dropped or dismissed; 1% were tried and won by the physician; 81% are still pending.

Damages awarded have also been going up in the last few years. Prior to 1965 only 8.8% of the awards in Texas were over $20,000. By 1973, a year when disposition of many cases reported in the survey were concluded, the figure had risen to 20.1%. In that same year, 85.5% of all claims or suits had asked for more than $20,000.

Claims or suits still pending on prior years could account for yet additional dollars required to be paid out on Texas experience. Of those claims reported by survey respondents for the year 1973, more than $2.7 million had been paid in awards. Still pending from that year are 36% of the claims or suits. More than $2.3 million has been paid on claims reported in 1974 with 61% still pending.

NEWS

Increased premiums

The increased frequency and severity of claims or suits have been reflected in increased premiums for Texas doctors. The TMA survey covered only the first eight months of 1975 and did not reflect increases occurring in the latter part of the year. For example, from 1970 to 1975, there was a 571% increase in rates for basic coverage ($100,000/300,000) for anesthesiologists; a 313% increase for family physicians.

For higher basic coverage ($200,000/600,000) during the same period, there was a 631% increase in rates for orthopedic surgeons; 621% for anesthesiologists; 394% for obstetricians; and 290% for family physicians.

Survey Definitions

Suit:	A petition filed in court and a citation actually served charging the physician with negligence.
Claim:	No suit filed in court but a request for money damages against a physician was investigated and negotiated by attorneys or the insurance carrier.

Umbrella coverage

The TMA survey indicates a trend in relation to umbrella coverage carried by Texas physicians. An increasing number of physicians carried this type of coverage up into 1973 when there began a marked reduction in the percentage of doctors carrying umbrella coverage. Although no concrete reason for this trend was manifested in the survey results, it could be attributed to the increasing unavailability and the prohibitive premium rates for this type of coverage.

As for the cost of umbrella coverage, the same upward trend indicated for basic coverage was apparent.

Impact of crisis

The TMA survey documents that the impact of the malpractice crisis on the medical and health care system goes beyond the problem of increased costs. One of the compounding problems of the medical malpractice crisis is the dictation of clinical decisions and medical practice in order to obtain insurance or the forced reduction in the total range of medical care by a single physician private practitioner in order to keep or obtain insurance coverage.

The problem of keeping or obtaining malpractice insurance coverage in the state is worsening. Fourteen percent of the survey respondents said that a carrier had refused to renew their policy at one time or another. In particular, this answer included 17% of the family physicians; 28% of anesthesiologists; and 30% of all neurosurgeons.

In order to obtain insurance, physicians are limiting their scope of services. The survey indicated that 8% have already been forced to cut back services. The percentage varies from specialty to specialty, but 20% of the family physicians indicated that the impact service reduction had been forced upon them in order to obtain insurance.

The further apparent impact is that, because of the threat of a lawsuit, 51% of all respondents indicated that they feel they must limit procedures performed. This figure included 73% of family practitioners and 47% of general surgeons.

Because of the high numbers of family practitioners who are limiting their services, this impact on availability can be expected to be felt more acute-

True 3000 years ago . . . True today.

The Texas Medical Association has sponsored a Group Insurance Program as a service to its members for over 20 years. The success of the Program is substantiated by the fact that 9,258 individuals were insured on November 1, 1975 and the number increases daily.

The purchase of insurance is an individual choice. There is no concern in this regard. However, there is concern when the effectiveness of the TMA group coverage is questioned without a complete comparison being made.

If attempts are made to persuade you to give up any coverage you have in force, demand a complete comparison of both policies involved. Make sure that the comparison includes such things as how long benefits will be paid and the qualifying circumstances, application of deductibles, coordination clauses, partial payments, amounts paid for specific losses, cost projections, and the date on which coverage reduces or terminates due to age.

Current insurance advertising codes and state insurance laws prohibit the use of misleading statements, examples of high dollar amounts which are in fact projections of benefits under specific circumstances, or any type of presentation which involves maximums without due regard to minimums and restrictions.

The ultimate choice is yours, but do not make your choice on anything less than factual information.

We urge you to discuss this message with your personal insurance counselor or agent. We are confident that he will agree with the contents.

Committee on Association Insurance Programs
Texas Medical Association

NEWS

ly in the rural and underserved areas of the state.

Impact on Medicare/Medicaid patients

A critical impact of the malpractice crisis in Texas appears to be affecting the availability of medical care for Medicare and Medicaid recipients. Survey results show that 22% of the physicians' patients are on Medicare and 10% are on Medicaid. There is a higher percentage in such specialties as urology, radiology, ophthalmology, internal medicine, and family practice.

Because the reimbursement of physicians treating these patients fails to allow for the dramatic increase in malpractice premiums, many physicians are making a determination to reduce the number of Medicare and Medicaid patients. Six percent of the survey respondents expect the number of Medicare patients to be reduced; 10% feel they will decrease the percentage of Medicaid patients. In particular, these figures include orthopedic surgeons, neurosurgeons, internists, and family physicians.

On the other hand, many specialties feel their percentage will increase or remain the same. However, if the rate of reimbursement does not change, it appears likely that higher increases in malpractice fees will be passed on to the private patients.

Survey Highlights

- Malpractice suits in Texas have quadrupled since 1971
- Awards have increased 500% since 1971
- Half of Texas physicians will limit services because of the malpractice insurance crisis

Survey comprehensive in scope

In addition to documenting the major factors constituting the professional liability crisis in Texas, the TMA survey developed an overall picture of insurance experience and practice patterns of Texas physicians.

The survey report tabulates such items as the types of practice, specialty distribution, medical school attendance, age and average years in practice, hours per week in practice, total years of practice, medical practice expenses and the relative increase in such expenses as they relate to malpractice insurance premiums.

For the first time, the survey findings provide definitive answers regarding malpractice issues in the state.

Other findings

At the time of the survey, 95% of all respondents had insurance coverage. For the larger specialties these percentages ranged from 89% of the neurosurgeons to 99% of the internists.

At that time, 2.5% of the physicians did not have coverage because the premium was too high; 1.2% chose not to maintain coverage, 1.1% did not have coverage for other reasons; and .5% were unable to obtain coverage at any price.

Malpractice Insurance Profile Highlights

Physicians (%)	Coverage
5%	less than $100,000/300,000
39%	$100,000/300,000
44%	$200,000/600,000
12%	greater than $200,000/600,000

The data regarding malpractice insurance coverage are changing daily. Based upon survey information and recent developments in the insurance field, it appears that 26% to 28% of

the physicians in private practice in Texas who had insurance at the time of the survey will be required to find a new source of basic coverage within the next four to six months. This occurrence is projected on the knowledge of those carriers who plan to withdraw from certain market areas or to refuse renewal of policies. At the present time, with the exception of the Joint Underwriting Association, which is limited to $300,000 basic coverage, there does not appear to be a viable market for malpractice insurance for this 26% to 28%.

Physician profile

From the survey profile of Texas physicians and their medical practices, the following conclusions are evident:

Physician Profile Highlights	
75.5%	in specialties of pediatrics, ophthalmology, internal medicine, radiology, urology, family practice, anesthesiology, general surgery, obstetrics-gynecology, othopedic surgery, neurosurgery
93.9%	in private practice (solo, partnership, group)
51%	graduates of Texas medical schools

(1) Physicians cannot significantly increase practice revenue to pay higher malpractice insurance premiums by working more hours per week or weeks per year.
(2) Medical practice expenses have increased substantially during the 1970-1975 period and the sizeable increases in malpractice insurance rates have contributed significantly to these increased practice expenses.
Because the survey results became available only at press time, a further detailed report on the survey will be forthcoming.

Texans assist earthquake victims

Citizens from across the state responded to the needs of the earthquake survivors in Guatemala in early February. In the Houston area, the Harris County Medical Society coordinated efforts to send desperately needed medical supplies to the major hospital in Guatemala City.
A load of 500 units of fresh frozen plasma from the Gulf Coast Regional Blood Center in Houston was the first American shipment to reach the Central American Republic. It was followed by ten additional flights with some 40,000 pounds of specific medical needs requested by the physicians at the Roosevelt Hospital in the nation's capital by short wave radio.
At the request of the physicians in Guatemala, a Harris County Medical Society team of orthopedic surgeons and anesthesiologists flew to the country and assisted in clearing the backlog of 400 fracture cases which were slowing down other emergency care at the hospital.
Dr. C. C. Shullenberger, president of the medical society, moved within hours of the first news reports of the earthquake to authorize the effort.
"Our experience in the Nicaragua and Honduras disasters provided an ideal background to respond quickly and effectively," he said.

California firm takes CHAMPUS contract

The Defense Department civilian health program (CHAMPUS) has selected Health Applications Systems (HAS), Inc, of Burlingame, Calif, to administer the CHAMPUS program in a five-state Southwestern US area including Texas.
HAS won the CHAMPUS contract in a heated competition, beating out bids by Blue Cross-Blue Shield, Mutual of

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Omaha, the American Association of Foundations for Medical Care, and the New Mexico-based Dykewood Corp, among others. The contract gives HAS responsibility for administering CHAMPUS in California, Nevada, Arizona, New Mexico, and Texas, an area currently being administered by eight intermediaries.

Defense Department officials figure that were HAS handling CHAMPUS claims in that area during this fiscal year under terms of the new fiscal 1977 contract, the taxpayers would save about $3 million. HAS bid on a pre-claim charge of $3.26, substantially lower than most intermediaries now are charging to handle Medicare claims.

Defense Department health officials decided to consolidate the CHAMPUS contract for the Southwest area after noting that the individual intermediaries had been varying widely in claim costs. The area involves nearly one-third of the total CHAMPUS system.

Average student debt reaches $9,000

According to the Association of American Medical Colleges, $9,000 is the average debt of seven out of ten medical students when they reach the final year of school.

The AAMC "Survey of How Medical Students Finance Their Education 1974-1975" also shows that one-third of the students come from families with incomes below $15,000. Slightly more than one-third (37%) come from families with incomes of more than $25,000. Copies of the study may be obtained for $5 each from AAMC, 1 Dupont Circle, NW, Washington, D C 20036.

Nurses hope to revise licensing act in 1977

The Texas Nurses Association's Board of Directors has voted to support a revised Professional Nursing Practice Act in the 1977 Texas Legislature. Their action stated that "if certain factors are present," like a quality document, favorable legislative climate, adequate support within and without the profession, then legislative action will be urged. The TNA legal counsel and a special task force have been involved in the writing of a draft document to strengthen the licensing act. Copies have been shared with TNA districts and various government, nursing and professional liaison groups, organizations, or agencies. Copies of the draft are available from TNA. Minimum contributions of $1 per copy are requested. Contributions will be used in a special Nurse Practice Act fund.

Medical schools urged to recruit from rural areas

Medical schools are urged to enroll more students from small towns and rural areas and to step up training programs for family medicine to produce more doctors that are likely to practice in rural areas, in a report in the Feb 2 issue of the *Journal of the American Medical Association.*

Physicians with nonmetropolitan backgrounds are two to three times as likely to select nonmetropolitan practice as physicians with urban backgrounds, a study conducted by the University of Missouri School of Medicine at Columbia indicates.

In addition, physicians who enter family medicine are almost three times as likely to select nonmetropolitan practice as physicians in other primary-care specialties.

A combination of these two factors results in two-thirds selecting rural or small town practice according to the study.

While 26% of the nation's population lives in nonmetropolitan counties (those with no city having greater than 50,000 population), only 13% of the nation's physicians reside in these

counties. The study further reports that students with rural backgrounds are substantially underrepresented in the nation's medical schools. Only 17% of entering medical students are from these counties. However, studies show that the small-town student who specializes is much less likely to return to rural practice. Thus, there is a need for more medical school programs that stress preparation for family medicine.

Research center established

A major research center to mount a sustained scientific attack on heart disease was established at Southwestern Medical School, Dallas, in action taken recently by The University of Texas System Board of Regents.
Approved by the regents was an agreement creating the Harry S. Moss Heart Center, a facility "to be operated exclusively for the development of an innovative, interdisciplinary cardiovascular program relative to the cause, prevention, and treatment of heart disease."
Under terms of the agreement with trustees of the Harry S. Moss Trust for the Prevention and Cure of Heart Disease, the center will receive $250,000 annually for a ten year period to support a wide spectrum of long-term cardiovascular studies.
Director of the new center will be Dr. Jere H. Mitchell, professor of internal medicine and director of Southwestern's cardiopulmonary laboratory.

"Are you willing to submit our differences in diagnosis to arbitration?"

Fee increase attributed to professional liability

Physicians' fees rose 11.8% in 1975, according to the Consumer Price Index published by the Bureau of Labor Statistics.
The increase in December was 1.2%. Bureau of Labor Statistics officials attributed the increases to the rising cost of professional liability insurance premiums. Hospital service charges rose 13% during 1975, according to the Consumer Price Index.

Humanities seminars scheduled for 1976

The National Endowment for the Humanities will again support a program of humanities seminars for physicians and other members of the health professions in 1976 including a seminar in Galveston Sept 13-Oct 8.
The seminars are designed to bring medical practitioners together with distinguished humanists from the fields of history, religion, sociology, and philosophy for a month of full-time study devoted to such issues as ethical conflicts, the rights of patients and practitioners, the purpose and limits of the medical professions, and their relations to the community.
Up to 15 participants will attend each seminar tuition free and will receive a $1,200 stipend to cover expenses, plus reimbursement for travel up to a $300 maximum.
Seminars are also scheduled at Ohio State University in Columbus, the University of Pennsylvania in Philadelphia, and Stanford University in Stanford, Calif.
Dr. H. Tristram Engelhardt, Jr., associate professor of the philosophy of medicine in the Institute for the Medical Humanities of The University of Texas Medical Branch, will direct the Galveston seminar. This seminar will examine the general issue of patients' rights and the particular issue of the right to health care through a consid-

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Contraindication: Idiosyncrasy to this drug.
Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.
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Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.
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eration of the basic philosophical and ethical issues that bear on the status of the individual, the nature of justice, and the relationship between the individual and society. Further information on the seminar may be obtained from Dr. Engelhardt.

TMA committee studies insurance comparisons

According to Dr. Richard L. Vardy, chairman of the Texas Medical Association's Committee on Association Insurance Programs, there have been occasional instances of competing agents' using unfair and incomplete comparisons in an effort to persuade participants of the TMA program to switch their coverage.

"The committee recently examined a comparison an agent was using for disability insurance," Dr. Vardy said. "Among other unfair examples, the minimums of the TMA plan were compared with the maximums of his policy to the extent that it appeared that TMA had little to offer."

Dr. Vardy added that all policies have maximums, minimums, and restrictions. He said the application of the three in relation to benefit provisions should be paramount considerations before purchase.

"The manner in which a company chooses to apply the premium dollar to benefits is a choice. TMA has proceeded on the basis that emphasis should be placed on long term disability benefits for those who may become totally disabled prior to age 60. At the same time, consideration was given to the fact that adequate benefits are essential for disabilities which occur between age 60 and 70. Physicians who choose to practice between age 70 and 75 are also entitled to protection," the committee chairman explained.

Dr. Vardy said the insurance committee would welcome suggestions from members on the types of benefits they desire in the various plans. He emphasized the committee would pursue any benefit provision that can be included at a reasonable cost and applied on an equitable basis.

All activities of the TMA insurance program are under the jurisdiction of the Committee on Association Insurance Programs, the Council on Medical Service and Insurance and subject to approval of the governing bodies of the association. Rates, benefits, and restrictions are carefully evaluated in cooperation with the Prudential Insurance Company before they are accepted. Dr. Vardy said this type of administration has proven to be most effective.

Pathologist says laboratory frauds preventable

The recent Medicare, Medicaid frauds involving laboratories easily could have been prevented, according to Dr. James Stinson, president of the Texas Society of Pathologists, Inc.

"The tragedy of the whole situation is that the problem never should have occurred," Dr. Stinson said. "Until 1969 all medical laboratories were under the direction of a physician, usually a qualified clinical pathologist. Then a lawsuit by the federal government forced the College of American Pathologists to sign a consent decree that made it possible for persons not trained in medicine, and even lay-controlled corporations, to practice medicine in the area of medical laboratory diagnosis," the physician continued. "Now with one hand the federal government is uncovering abuses while the other hand has tied the most effective means of controlling these abuses."

Before the lawsuit, "the voluntary requirements for operating such a laboratory were stringent. All doctor-controlled laboratories were inspected at intervals by local, state, and national medical organizations to be sure

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they met standards for accuracy and ethical operation," Dr. Stinson said.

The pathologist said the scandal may be a blessing in that it has alerted physicians to the dangers to their patients of sending specimens to "cut-rate," "discount," "bargain basement" laboratories.

Jerry Chapman, a Texas welfare official, said if Texas medical laboratories are engaging in fraudulent billing, the amount of money involved would be very small since the department already monitors these labs. U S Sen Frank Church's (D-Id) Committee on Aging also has received data on the Texas situation and apparently the state still has a clean bill of health.

Dr. Stinson stated, "Senator Church and his committee deserve much thanks for uncovering this situation in which there is an unethical practice of medicine, possibly both by physicians and non-physicians. Hopefully the Church committee will press this investigation with the result that any unethical physician involved may have to forfeit his license and any non-physician will receive appropriate similar punishment. Perhaps the committee might go even further, considering the unfortunate results of the 'consent decree,' and recommend returning the practice of medicine to the physician."

Coastal state regions in receptive condition for dengue disease

Yellow fever has been effectively wiped out in this country, but the coastal regions of Texas and adjacent states are now in a highly receptive condition for dengue, another disease transmitted by the same mosquito, according to an entomologist at The University of Texas School of Public Health.

Dr. John E. Scanlon, associate dean for research at the school, has done extensive research on the *Aedes aegypti* mosquito in several parts of the world. He said he has become concerned recently over the status of the species in the Americas.

At present, there are no known cases of dengue in the continental United States, but the possibilities are increased as more and more people can afford to travel to other parts of the world which do have the disease.

There is no known vaccine for the disease, and the only solution to the worldwide problem is complete eradication of the *Aedes aegypti* mosquito.

TARP implemented in Texas hospitals

The Texas Admissions and Review Program (TARP) as conducted by the Texas Medical Foundation currently is being implemented in hospitals which have an appreciable number of Medicaid admissions.

Initial contacts have been made in all San Antonio and Corpus Christi hospitals with at least five Medicaid admissions a month, and contacts have begun in hospitals in Dallas and Houston.

The Texas Department of Public Welfare is requiring every hospital admitting Medicaid patients to use TARP. Each hospital may elect to have its TARP administered by TMF or to administer TARP for itself under the surveillance of Blue Cross-Blue Shield. The only alternative to the use of TARP is for a hospital to submit its proposed alternate plan for approval by the Department of Public Welfare in order to continue to be reimbursed for services provided Medicaid patients. The review of care provided Medicaid patients while they are in the hospital will replace the present claim-by-claim analysis with its attendant problems of frequent requests for records and resulting retrospective denial of claims.

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Before prescribing, see complete prescribing information in SK&F literature or *PDR*. The following is a brief summary.

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This fixed combination drug is not indicated for initial therapy of edema or hypertension. Edema or hypertension requires therapy titrated to the individual patient. If the fixed combination represents the dosage so determined, its use may be more convenient in patient management. The treatment of hypertension and edema is not static, but must be reevaluated as conditions in each patient warrant.

Indications: *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

Contraindications: Pre-existing elevated serum potassium. Hypersensitivity to either component. Continued use in progressive renal or hepatic dysfunction or developing hyperkalemia.

Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

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HELP STOP THE TEARS

of colic, diarrhea or similar malady

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Reference series to be published

The Commission on Professional and Hospital Activities (CPHA) has announced the publication of *Hospital Mortality, PAS Hospitals, United States, 1972-73,* the first book in a new reference series.

The book makes available in-hospital fatality rates and length-of-stay information for all patients discharged from short-term nonfederal U S hospitals participating in the Professional Activity Study (PAS).

Data displayed in *Hospital Mortality* have been compiled from over 24,000,000 individual patient discharge abstracts from 1,592 hospitals in the United States participating in PAS during 1972 and 1973. Patients are grouped into 349 diagnosis groups and 228 operation groups.

The commission is a nonprofit, nongovernmental research and education center in Ann Arbor, Mich.

Measles booster guidelines issued

A revised immunization schedule has been issued by the Bureau of Communicable Disease Services of the Texas Department of Health Resources.

One of the recommendations is that measles boosters should be routinely given to children who were previously immunized with measles vaccine prior to age 12 months, provided history of measles illness remains negative. The booster is to be given at age 12-16 months, or later (up to the 12th birthday).

Live measles vaccine was licensed in March, 1963. Therefore, it is now possible that some 12-year-old children were immunized with measles vaccine prior to their first birthday. Boosters for children 12 years and older are recommended on an individualized basis. History of measles illness among these children would negate the need for a booster.

NEWS

TMF offers to request customary profiles

The Texas Medical Foundation is offering to request customary and prevailing profiles from Blue Cross-Blue Shield for all TMF physician members and to follow-up with Blue Cross if they are not received. This service is being offered because many physicians have felt they have waited unnecessary lengths of time to receive their profiles.

The length of time to receive the information will be recorded by TMF to document the degree of the problem. The customary profile will be sent to each requesting physician with the prevailing profile for the physician's specialty in the appropriate geographical area. Current profiles are for calendar year 1974.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 2/29/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+ 9.6%	−33.0%	− 6.2%	1.5%
Loomis-Sayles Mutual Fund	+ 6.8%	−21.0%	− 3.7%	3.2%
Mercantile Bank Equity Fund	+12.8%	−35.8%	−16.5%	3.5%
Mercantile Bank Fixed Income Fund	+ 3.1%	−13.5%	− 8.6%	7.8%
T Rowe Price Growth Stock Fund	+ 7.0%	−34.1%	− 1.9%	2.1%
T Rowe Price New Income Fund	+ 0.9%	N/A	N/A	8.0%
Stein Roe & Farnham Balanced Fund	+ 9.0%	−24.9%	+ 4.1%	3.1%
Standard & Poor 500 Stock Average	+10.6%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+14.1%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

Join the Texas Medical Association Alaskan Adventure Air-Sea Cruise

Departing Houston & Dallas-Ft. Worth on August 4 and Returning August 12 from $1198

Fly by private chartered jet direct to Vancouver, British Columbia, to board your floating resort hotel, Princess Cruise Line's Island Princess. Then glide through the Inside Passage up the coast of Canada and the Alaska Panhandle

Carved thousands of years ago by ice age glaciers, the Inside Passage offers a spell-binding panorama. Cascading waterfalls. Beautiful fjords. Snow-dusted mountains rising from the water's edge. Mile-wide glaciers. Blue crystal ice floating in the sea. Fascinating fishing villages and gold rush towns.

At sea or ashore, everything has been arranged for your pleasure. Participate in optional shore excursions. Shop for soap stone carvings, gold jewelry or furs. Aboard ship, enjoy superb service, memorable cuisine, and nightly entertainment.

The low cost includes round-trip air-fair and the cruise, plus transfers and baggage handling.

The good life. We'll show you what it means as you behold America's last frontier. Join us aboard the Island Princess and leave the world in your wake.

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CAPITAL COMMENTS

AUSTIN: MALPRACTICE STUDY COMMISSION. The Texas Medical Professional Liability Study Commission held its eighth official meeting in Austin Feb 26. The commission heard a report from the joint underwriting association which indicated that the JUA had entered into servicing contracts with the Medical Protective Company, St. Paul Fire and Marine Insurance, and United States Fire Insurance. The JUA has now begun taking applications for excess coverage. As of January, the JUA has bound or written a policy on 87 doctors, one certified nurse anesthetist, ten professional associations, and one hospital, with excess coverage on 37 physicians and ten hospitals. The commission heard a presentation by Thomas L. Uhlin of St. Paul Fire and Marine Insurance Company regarding suggested changes on such subjects as the burden of proof, prior notice in relationship to the statute of limitations, elimination of the dollar demand, informed consent, collateral source rule, contingent fees, peer review immunity, punitive damages, specification of elements of damages and periodic payments. The commission also heard a report by Robert Bailey, actuary for the central office of the National Association of Insurance Commissioners, who discussed the NAIC 1975 closed claims study and the implications for Texas. He indicated that the figures for Texas were in line with the national averages. The commission was scheduled to meet again on March 19 at which time TMA was to present a report on its 1975 Medical Professional Liability Insurance Survey.

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: HSA ACTIVITY. Gov Dolph Briscoe has informed the Secretary of the Department of Health, Education, and Welfare that in his opinion the best interest of the citizens of Texas would be served by not designating *any* health system agency during the first review cycle. The governor stated, "Much necessary public awareness has been generated since the original deadline for letters of intent on Dec 1, 1975. Much more public awareness and participation in this process is needed if the program is ever to have the requisite public support. A continuance for several months will help to resolve many of the deficiencies that now exist. Hopefully, during this period final rules regarding health system agency designations will be developed and published by your department."

AUSTIN: TMA POSITION NOTED. In letters to Sens Lloyd Bentsen and John Tower, TMA officials have pointed out particularly objectionable features of health manpower legislation now pending before Congress. The communication, signed by Dr. Nym L. Barker, TMA president; Dr. Joseph T. Ainsworth, chairman, Council on Medical Legislation; and Dr. William F. Ross, chairman, Council on Medical Education and Hospitals, cited opposition to (1) unnecessary provisions to control residency training programs; (2) mandatory service of students; (3) punitive payback provisions imposed on students; and (4) federal licensure. The House has passed HR 5546 and this bill, along with S 989, S 991, and S 1357, is pending before the Senate Subcommittee on Health. Hearings have essentially been completed and mark-up sessions are expected shortly. In addition to the above bills, the Administration introduced its proposal after the Senate hearings were completed.

WASHINGTON: MEDICARE. Dr. Raymond Holden, chairman of the Board of Trustees of the American Medical Association, recently testified before the House Ways and Means Subcommittee on Health during its hearings on the Ford Administration proposal to alter the present Medicare program. Dr. Holden, speaking of the proposed 4% limitation on increases in physicians' fees under Medicare, stated, "We must point out unequivocally that the percentages proposed are wholly unrealistic. The proposal ignores the realities occurring in our economy throughout the country. Moreover, inflationary conditions existing generally in our economy cannot justifiably be the basis for a position of arbitrary and discriminatory ceilings on a single segment of the economy."

WASHINGTON: ATTACK ON AMPAC UNFOUNDED. The AMA and AMPAC were never investigated by the Federal Election Commission despite headlines to the contrary last summer during the "Sore Throat" allegations. That is because there was nothing illegal involved in the charges that AMA officers were directing campaign aid funds from the American Medical Political Action Committee. FEC's assistant general counsel has informed the AMA that the commission "never conducted an investigation. If the facts as alleged were true, there would not be a violation of the Federal Election Campaign Act," he said. The *Washington Post* and Associated Press had reported that the FEC was investigating the AMA and AMPAC for election law violation.

WASHINGTON: FEDERAL BUDGET 1977. In the President's proposed 1977 budget, the Administration included $20 million for the five-year demonstration project designed to test health maintenance organizations (HMOs), the prepaid health care delivery system, as an alternative to the traditional indemnity plan. The Administration also proposes to spend $62 million for the continued development of professional standards review organizations (PRSOs). The review system is supposed to reduce the amount of unnecessary hospitalization. HEW Secretary David Mathews said an additional $27 million would be obligated from Medicare and Medicaid funds to pay for the actual cost of review. By 1977, he said, "Twenty-seven percent of all hospital admissions can be reviewed and may save the government as much as $150 million."

WASHINGTON: MD CONGRESSMEN. One of three physicians in Congress, Rep Thomas Morgan (D-Pa), announced that he will retire at the end of this session. Dr. Morgan, 69, has served in Congress for 32 years and has chaired the House Foreign Affairs Committee for 18 years. Other physician congressmen are Dr. Tim Lee Carter (R-Ky) and Dr. Larry McDonald (D-Ga).

WASHINGTON: NEW LIABILITY REGULATIONS. Final regulations governing liability of Medicare beneficiaries, physicians, and other providers for incorrect payments under the program have been published by HEW. The regulations provide that a Medicare supplier, provider or physician who was incorrectly paid through no fault of his own, does not have to refund incorrect payment. The regulations also state that an incorrectly paid provider is deemed to have been without fault, in the absence of contrary evidence, if the payment was found to be incorrect later than three years after it was made. Responsibility for the incorrect payment will shift to the beneficiary in these situations, but recovery will be waived where the beneficiary is found to be without fault or if the recovery would cause economic hardship or deprive the beneficiary of medical service.

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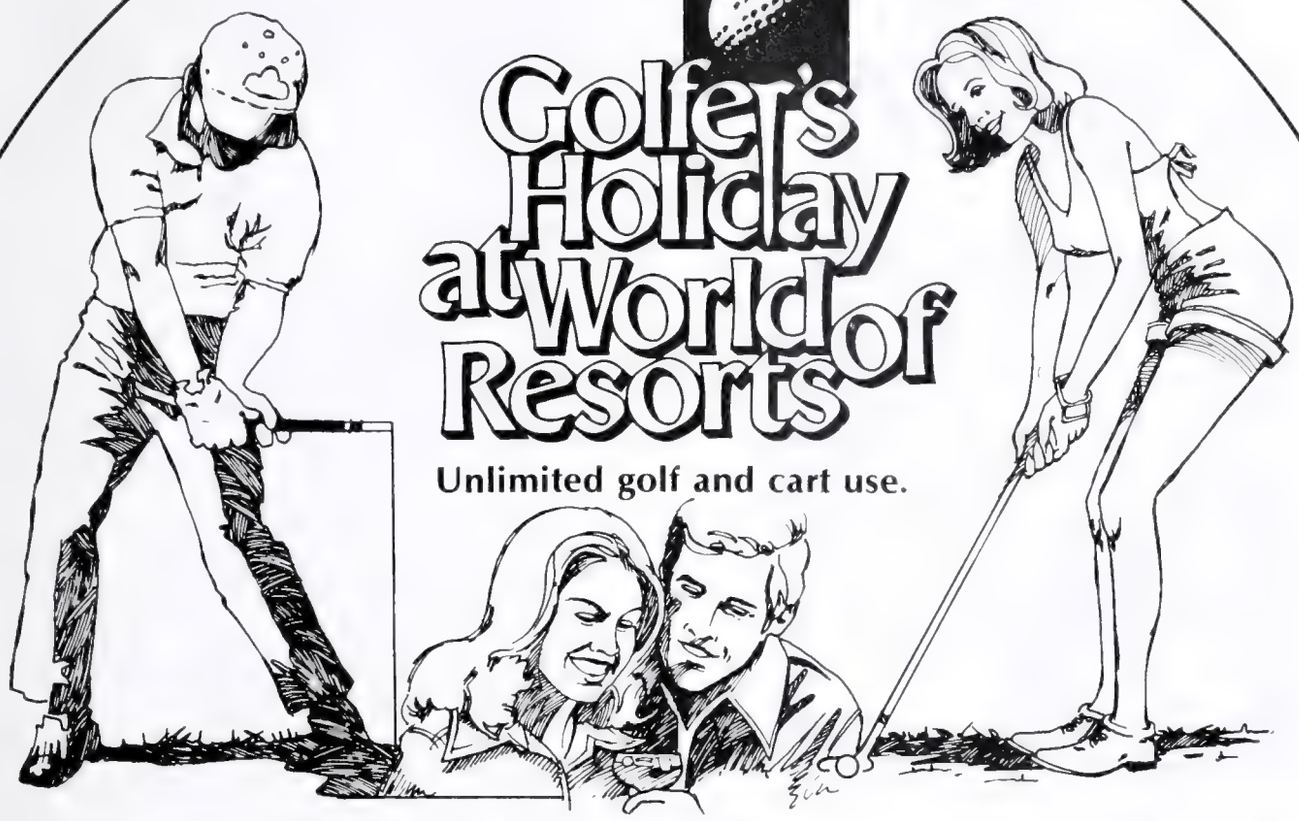

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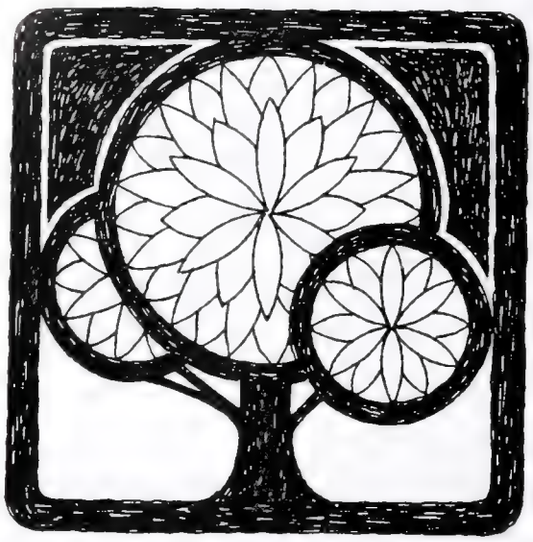
ART EXHIBIT



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MAY 6-7-8, 1976

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BRIEF SUMMARY OF
PRESCRIBING INFORMATION
ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

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eliminates Pinworms and Roundworms with a single dose

- **Single dose effectiveness against both pinworms and roundworms**— The only single-dose anthelmintic effective against pinworms *and* roundworms.
- **Nonstaining**— to oral mucosa, stomach contents, stools, clothing or linen.
- **Well tolerated** — the most frequently encountered adverse reactions are related to the gastrointestinal tract.
- **Economical** — a single prescription will treat the whole family.
- **Highly acceptable** — pleasant-tasting caramel flavor.
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Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles

Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material

Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials

Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the Managing Editor and consultants.

News

News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings

Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries

Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns

Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing

All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright

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Point of View

Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

Look at all the Continuing Medical Education opportunities the AMA has planned for you in 1976!

More and more physicians are interested in updating their medical skills and knowledge in the interest of better patient care. And, an ever-increasing number of state medical associations, specialty societies, and other medical groups are stipulating continuing medical education as a membership requirement.

In response to these developments, the AMA has greatly expanded its C.M.E. programs.

The nine regional meetings, multidisciplinary in approach, are of interest to a variety of medical specialists and physicians in primary care. Scheduled on weekends, they make it easier and more convenient for you to continue your education. Then there are the two AMA conventions. The Annual *alone* features 53 postgraduate courses, 41 3-hour symposia, the new telecourses and many, many other features in continuing education.

All courses at regionals and conventions are accredited on a hour-for-hour basis in Category I.

The AMA's Physician's Recognition Award fulfills C.M.E. requirements of many organizations, state laws and individual physicians.

REGIONAL C.M.E. MEETINGS

Jan. 17, 18	Tulsa, Okla.
Feb. 28, 29	Denver, Colo.
March 17-20	Lexington, Ky.
April 3, 4	Indianapolis, Ind.
April 3, 4	Detroit, Mich.
May 9	Dallas, Tex.
Sept. 4, 5	Jackson Hole, Wyo.
Sept. 11, 12	Milwaukee, Wis.
Sept. 10-12	Portsmouth, N.H.

125th ANNUAL CONVENTION

June 26-30	Dallas, Tex.

30th CLINICAL CONVENTION

Dec. 4-7	Philadelphia, Pa.

For more information about meetings, courses, accommodations, tuition fees, etc., write for a free course catalogue.

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American Medical Association
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WHEN DIET ALONE FAILS TO LOWER CHOLESTEROL

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(Sodium Dextrothyroxine)

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question

Proven Cholesterol-Lowering Adjunct to Diet.

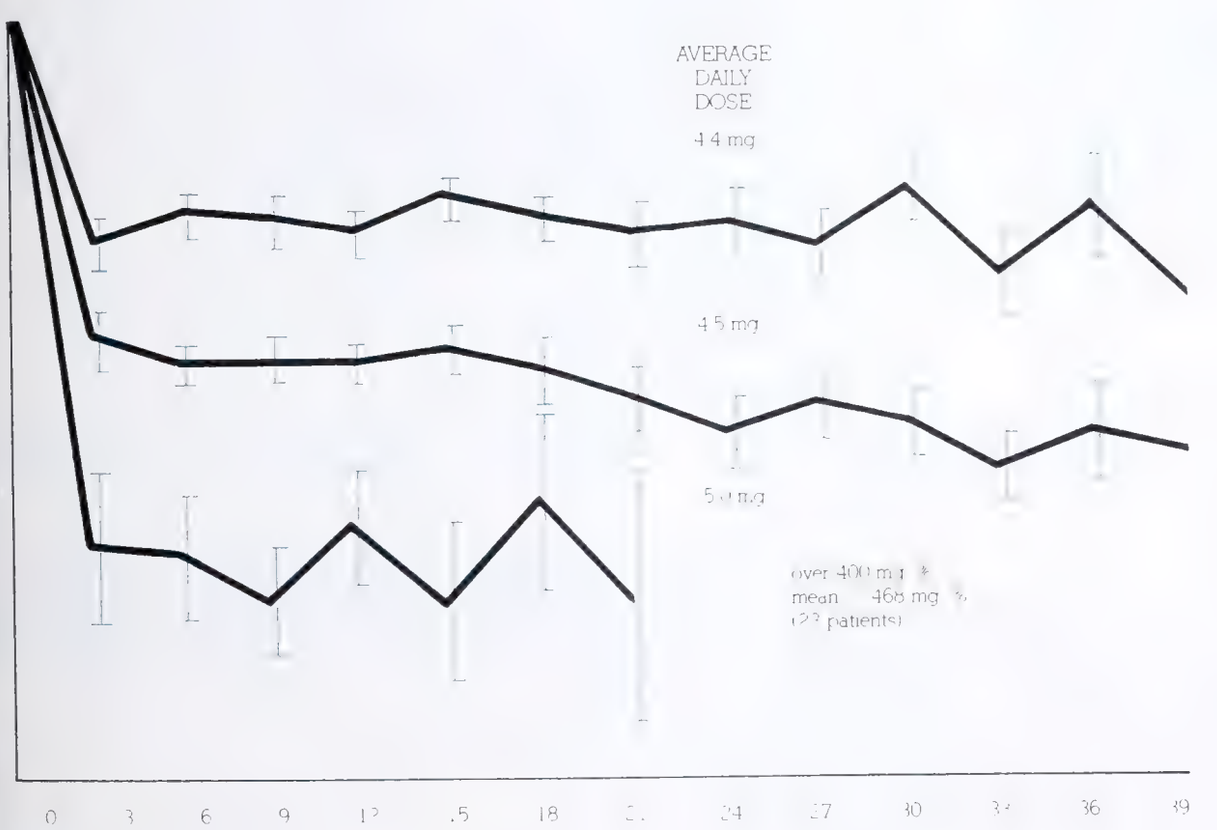
n effective agent for low density lipoproteins in uthyroid, Non-Cardiac Patients.

HOLOXIN® (Sodium Dextrothyroxine) is the con-enient and practical way to manage the hard-to-anage patient who doesn't always follow the diet egimen that you've outlined.

onvenient once-a-day dosage encourages patient operation, and it's economical for long-term erapy.

CHOLOXIN (Sodium Dextrothyroxine) is a thyroid analogue which effectively lowers elevated serum cholesterol 15 to 35% (see chart below) in low density lipoproteins.

CHOLOXIN (Sodium Dextrothyroxine) has undergone ten years of clinical trials and seven years of practice. The clinical trials consisted of 337 clinical studies involving over 3,000 hypercholesterolemic non-cardiac patients. It is among the most thoroughly evaluated drugs ever presented to physicians



NOT ALL PATIENTS ARE REPRESENTED AT EACH TIME INTERVAL

NOTE:
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Choloxin
(Sodium Dextrothyroxine)

Effectively Lowers Elevated Cholesterol With Convenient Once-A-Day Dosage

Four strengths... 1, 2, 4, and 6 mg.... are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage.

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommende
Adult Hypercholesterolemic	1 0-2 0 mg	1 0-2 0 mg	4 0-8 0 mg	4 0-8 0 mg
Pediatric Hypercholesterolemic	0 05 mg /kg body weight	0 05 mg /kg	0 1 mg /kg body weight	4 0 mg
Hypothyroid Cardiac	0 5-1 0 mg	1 0 mg	4 0 mg	4 0 mg

Description
CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine It is chemically described,as D-3,5,3',5'-tetraiodothyronine sodium salt

Actions
The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces Cholesterol synthesis is not inhibited and abnormal metabolic end products do not accumulate in the blood

Indications
This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication **Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN (sodium dextrothyroxine) is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN (sodium dextrothyroxine) dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.**

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications
The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated

1 Known organic heart disease including angina pectoris, history of myocardial infarction, cardiac arrhythmia or tachycardia either active or in patients with demonstrated propensity for arrhythmias, rheumatic heart disease, history of congestive heart failure, and decompensated or borderline compensated cardiac status
2 Hypertensive states (other than mild labile systolic hypertension)
3 Advanced liver or kidney disease
4 Pregnancy
5 Nursing mothers
6 History of iodism

Warnings
CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time. Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN (sodium dextrothyroxine) therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN (sodium dextrothyroxine) therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated

When CHOLOXIN (sodium dextrothyroxine) is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease treatment should be initiated with care Special consideration of the dosage schedule of CHOLOXIN (sodium dextrothyroxine) is required This drug may increase the oxygen requirements of the myocardium especially at high dosage levels Treated subjects with coronary artery disease must be seen at frequent intervals If aggravation of angina or increased myocardial ischemia, cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients the dosage should be reduced or the drug discontinued

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN (sodium dextrothyroxine) As with all thyroactive drugs hypothyroid patients are more sensitive to a given dose of CHOLOXIN (sodium dextrothyroxine) than euthyroid patients

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency This condition may be enhanced in patients receiving thyroid analogues These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones, it may be wise to discontinue CHOLOXIN (sodium dextrothyroxine) in euthyroid patients at least two weeks prior to an elective operation During emergency surgery in euthyroid patients and in surgery in hypothyroid patients in whom it may not be advisable or possible to withdraw therapy, the patients should be carefully observed

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs If sodium dextrothyroxine is later withdrawn from patients who required an increase of insulin (or oral hypoglycemic agents) dosage during its administration the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state

When either or both impaired liver or kidney function are present the advantages of CHOLOXIN (sodium dextrothyroxine) therapy must be weighed against the possibility of deleterious results

Usage in Women of Childbearing Age
Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug it can be given to those patients exercising strict birth control procedures Since pregnancy may occur despite the use of birth control procedures admin istration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother Teratogenic studies in two animal species have resulted in no abnormalities in the offspring

Precautions
It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels These increased serum PBI values are evidence of absorption and transport of the drug and should NOT be interpreted as evidence of hypermetabolism, similarly they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine) PBI values in the range of 10 to 25 mcg% in treated patients are common

If signs or symptoms of iodism develop during CHOLOXIN (sodium dextrothyroxine) therapy, the drug should be discontinued

A few children with familial hypercholesterolemia have been treated with CHOLOXIN (sodium dextrothyroxine) for periods of one year or longer with no adverse effects on growth However it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed

Adverse Reactions
The side effects attributed to dextrothyroxine therapy are for the most part due to increased metabolism, and may be minimized by following the recommended dosage schedule Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease the incidence of adverse effects is increased in hypothyroid patients and is highest in those patients with organic heart disease superimposed on the hypothyroid state

In the absence of known organic heart disease some cardiac changes may be precipitated during sodium dextrothyroxine therapy In addition to angina pectoris arrhythmia consisting of extrasystoles ectopic beats or supraventricular tachycardia ECG evidence of ischemic myocardial changes and increase in heart size have been observed Myocardial infarctions both fatal and non-fatal have occurred but these are not unexpected in untreated patients in the age groups studied It is not known whether any of these infarcts were drug related

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia nervousness palpitations tremors loss of weight lid lag sweating flushing hyperthermia hair loss diuresis and menstrual irregularities Gastrointestinal complaints during therapy have included dyspepsia nausea and vomiting constipation diarrhea and decrease in appetite

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise tiredness, visual disturbances, psychic changes paresthesia muscle pain, and various bizarre subjective complaints Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient although its relationship to CHOLOXIN (sodium dextrothyroxine) therapy was not established

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN (sodium dextrothyroxine), a worsening of peripheral vascular disease sensorium, exophthalmos, and retinopathy have been reported

CHOLOXIN (sodium dextrothyroxine) potentiates the effects of anticoagulants, such as warfarin or Dicumarol, on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants On the other hand dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section)

Dosage and Administration
For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage The maximum in patients receiving digitalis therapy is 4 mg

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is approximately 0 1 mg (100 mcg) per kilogram The initial daily dosage should be approximately 0 05 mg (50 mcg) per kilogram to be increased in up to 0 05 mg (50 mcg) per kilogram increments at monthly intervals The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol

If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn

How Supplied
CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4 and 6 mg tablets

March 1975

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

consider the effect on coexisting glaucoma when you prescribe a vasodilator*

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*Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500, 1000, 5000 and Unit Dose.

TEXAS MEDICAL ASSOCIATION ANNUAL SESSION

The 1976 Texas Medical Association Annual Session will take place in Dallas, May 6-9, 1976. The program features 52 guest speakers, 20 section programs, 22 curbstone consultations, 13 continental breakfast presentations, and live teaching demonstrations. Also on the program are golf, tennis, fraternity and alumni parties, class reunions and TMA's Saturday Night Party. There is no registration fee for TMA members. (For further details regarding Annual Session, see story on p 99-104 and information in this section regarding meetings of related societies.)

Contact: C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

AMERICAN MEDICAL ASSOCIATION

The American Medical Association, along with 20 other organizations, will sponsor the 29th National Conference on Rural Health Apr 8-9, 1976, at the Hyatt Regency Phoenix, in Phoenix, Ariz. The theme of the conference is Horizons for Health in Century 3, Improving Distribution of Health Services. The meetings will convene at 9 am, Thurs, Apr 8, and conclude at 3 pm, Fri, Apr 9. The registration fee, which includes coffee breaks, two luncheons, and a cassette of the conference highlights, is $40. Registration fee for students is $10.

Contact: Dept of Rural and Community Health, AMA, Division of Medical Practice, 535 N Dearborn St, Chicago 60610.

HOUSTON SOCIETY OF CLINICAL PATHOLOGISTS

The annual spring seminar of the Houston Society of Clinical Pathologists is entitled Diagnostic Cytopathology—New and Practical Applications. The meeting is scheduled for Apr 10, 1976, in the auditorium of St. Luke's Episcopal Hospital, Texas Medical Center, Houston. Invited speakers and their topics are Dr. John K Frost, Cervix and Endometrium; Dr. Nelson D Holmquist, Urinary Tract; Dr. Eileen King, Body Fluids; Dr. Herman Medak, MD, DDS, Oral Cavity; and Dr. Lewis B Woolner, Lungs.

Contact: Dr. S Donald Greenberg, Seminar Chmn, c/o Dept of Pathology, Baylor College of Medicine, Houston 77025.

COMING MEETINGS

CURRENT MEETINGS IN TEXAS

CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Fairmont Hotel, Dallas, 2:30-5 pm, May 7, 1976. Meeting with TMA Section on Public Health. Guest speaker is Dr. John F Finklea, Dir, Natl Institute for Occupational Safety and Health, Dept of Health, Education and Welfare, Rockville, Md. Topic will be Medical Surveillance Requirements in OSHA Standards. Contact: Dr. Fratis L Duff, Dir, Tex Dept of Health Resources, 1100 W 49th, Austin 78756.

FLYING PHYSICIANS ASSOCIATION, TEXAS CHAPTER, Fairmont Hotel, Dallas, 9 am-5 pm, May 6, 1976. Joint session with Texas Air-Medics Association. Dr. Robert L Wick, Jr, Assoc Prof of Preventive Medicine, Dept of Preventive Medicine, Ohio State University College of Medicine, Columbus, to speak. Topics: Passenger Response to Airline Cabin Depressurization and In Flight Drug Investigations. Contact: Dr. Lawrence H Wilk, Pres, 1001 Louisiana 203, Corpus Christi 78404.

INTERNATIONAL COLLEGE OF SURGEONS, TEXAS STATE SURGICAL DIVISION, Sheraton-Dallas Hotel, Dallas, 2-4:10 pm, May 6, 1976. Contact: Dr. Casey E Patterson, Pres, 6011 Harry Hines Blvd, Dallas 75235.

TEXAS ACADEMY OF FAMILY PHYSICIANS, Parisian Room, Fairmont Hotel, Dallas, 8:15 am-5 pm, May 6, 1976. Seminar on Renal Diseases. Topics include Proteinuria and Hematuria—Patient Evaluation; Glomerulonephritis; Management of Chronic Renal Failure; others. All guest speakers are members of The University of Texas Medical Branch faculty. Program acceptable for six hours prescribed credit, AAFP. Registration fee, $20. No advance registration. Contact: Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

TEXAS AIR-MEDICS ASSOCIATION, Fairmont Hotel, Dallas, 9 am-5 pm, May 6, 1976. See details, Flying Physicians Association.

TEXAS ASSOCIATION OF NEUROLOGICAL SURGEONS, Fairmont Hotel, Dallas, 8 am-4 pm, May 7, 1976; and 2-5 pm, May 8, 1976 (in conjunction with TMA Section on Neurological Surgery, Texas

Society of Anesthesiologists). May 8 meeting features Dr. John M Tew, Clinician in Neurosurgery, Mayfield Neurological Institute of Cincinnati, Inc, Cincinnati. Contact: Dr. Earl H Rafes, Pres, 3260 Fannin St, Beaumont 77701.

TEXAS ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Fairmont Hotel, Dallas, 6:30 pm, May 6, 1976. Contact: Dr. Marthalyn J Green, Pres, 1936 Amelia Ct, Dallas 75235.

TEXAS DERMATOLOGICAL SOCIETY, Fairmont Hotel, Dallas, 9 am-noon, May 8, 1976. Guest speaker, Dr. Walter R Nickel, Clinical Prof of Medicine and Pathology; Acting Chmn, Division of Dermatology, University of Calif at San Diego. Three topics to be announced. Contact: Dr. HF Johnson, Pres, 5 Medical Dr, Amarillo 79106.

TEXAS DIABETES ASSOCIATION, Fairmont Hotel, Dallas, 2-4:30 pm, May 6, 1976; and 8:15 am-12:30 pm, May 7, 1976. Dr. Peter H Forsham, Prof of Medicine and Pediatrics, Chief of Endocrinology, Dept of Medicine; Dir, Metabolic Research Unit, University of Calif Hospital, San Francisco, is guest speaker. Contact: Dr. Sherman B Lindsey, Pres, Scott and White Clinic, Temple 76501.

TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Sheraton-Dallas Hotel, Dallas, 2-5 pm, May 7, 1976. Speakers include Drs. Charles Ryan, Corporate Medical Dir, Sun Oil Co, Philadelphia, speaking on Interrelationship of HMO Practice and Occupational Medicine (2:30-3 pm); and Carl Zenz, Medical Dir, Allis-Chalmers Corporation, Milwaukee, speaking on Physiological Response to Occupational Heat Stress (3:15-3:35 pm). Contact: Dr. Frank J Kelly, Sec-Treas, Box 647, Amarillo 79177.

TEXAS OPHTHALMOLOGICAL ASSOCIATION, Fairmont Hotel, Dallas, 8:30 am, May 7, 1976; and 10 am-noon, May 8, 1976. Meeting jointly with TMA Section on Ophthalmology. Dr. William G Everett, Clinical Assoc Prof of Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, will present four 30-40 minute papers, topic selections pending. Contact: Dr. Whitney G Sampson, Pres, 537 W 20th St, Houston 77008.

TEXAS ORTHOPAEDIC ASSOCIATION, Sheraton-Dallas Hotel, Dallas, 8 am-4:30 pm, May 8, 1976. Featured speakers: Drs. Lanny L Johnson, Orthopaedic Surgery, East Lansing, Mich; Robert L Larson, Dir of Athletic Medicine and Orthopedic Consultant, Athletic Dept, University of Oregon, Eugene; G Dean MacEwen, Medical Dir and Surgeon-in-Chief, Alfred I duPont Institute, Wilmington, Del. Topics to be discussed include Reconstruction of the Acetabulum for CDH; The Turco Procedure—A Review of Cases and End Results; Scottish Rite Hospital—Experience with CDH; Patellar Compression Subluxation and Chondromalacia of Patella; Arthography; Arthroscopy—Its Use, Technique and Interpretation. Contact: Dr. E Burke Evans, Pres, UT Medical Branch, Galveston 77550.

TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Fairmont Hotel, Dallas, 9 am, May 7, 1976; and 9 am, May 8, 1976. Joint meeting with TMA Section on Otolaryngology. Dr. Karl M Morgenstein, Clinical Assoc Prof of Otolaryngology, University of Miami School of Medicine, Miami, Fla, featured speaker. Contact: Dr. James L Baldwin, Pres, 712 N Washington, Dallas 75246.

TEXAS RHEUMATISM ASSOCIATION, Sheraton-Dallas Hotel, Dallas, 9 am-5 pm, May 8, 1976. Dr. Gerald P Rodnan, Prof of Medicine and Chief, Division of Rheumatology and Clinical Immunology, Dept of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, to speak on Progressive Systemic Sclerosis—Variants and Pretenders; Dr. Daniel J McCarty, Jr, Prof and Chairman, Dept of Medicine, The Medical College of Wisc, Milwaukee, to discuss Clinical Variances of Arthritis Associated with Calcium Pyrosphosphate Crystal Deposition. Contact: Dr. J Donald Smiley, Pres, 5323 Harry Hines, Dallas 75235.

TEXAS SOCIETY OF ANESTHESIOLOGISTS, Fairmont Hotel, Dallas, 2-5 pm, May 8, 1976 (Joint session with TMA Section on Neurological Surgery); and 9 am-noon, May 9, 1976. May 8 session features Dr. Richard G Black, Assistant Dir, University Hospital Pain Clinic, University of Washington School of Medicine, Seattle, speaking on The Chronic Pain Syndrome. Also on program for May 8 is Dr. Herbert A Saltzman, Prof of Medicine; Dir, FG Hall Laboratory for Environmental Research, Duke University Medical Center, Durham, NC, speaking on Oxygenation of Body Tissues. May 9, Dr. Earl F Rose, MD, LLB, Prof of Pathology, Dept of Pathology, The University of Iowa College of Medicine, Iowa City, speaks on Products Liability for the Anesthesiologist. Contact: Dr. Cecil R Glass, Pres, Box 5587, Beaumont 77702.

TEXAS SOCIETY OF PATHOLOGISTS, INC, Fairmont Hotel, Dallas, 9 am-noon, May 9, 1976. Contact: Dr. James C Stinson, Pres, 2401 S 31st, Temple 76501.

TEXAS SOCIETY OF PLASTIC SURGEONS, Sheraton-Dallas Hotel, Dallas, 10 am-5 pm, May 7, 1976; and 9 am-1 pm, May 8, 1976. Three papers to be presented by Dr. Ray A Elliott, Jr, Albany Plastic Surgeons Associated, PC, Albany, NY. Contact: Dr. Jeff R Moore, Pres, Box 3755, Amarillo 79106.

For other courses and symposiums, see Continuing Education Courses, pp 43-46.

Calendar of Listings

■ Denotes Texas Meetings

APRIL

AMERICAN ACADEMY OF NEUROLOGY, Toronto, Apr 26-May 1, 1976. Stanley A Nelson, Exec Off, 4015 W 65th St, Suite 302A, Minneapolis 55435.

AMERICAN ACADEMY OF PEDIATRICS, Philadelphia, Apr 12-15, 1976. Dr. Robert G Frazier, 1801 Hinman Ave, Evanston, Ill 60204.

AMERICAN ASSOCIATION OF ANATOMISTS, Louisville, Apr 20-23, 1976. Dr. John C Finerty, Pres, LSU Medical Center, Suite 1510, Canal LaSalle Bldg, New Orleans 70112.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Los Angeles, Apr 23-25, 1976. William T Maloney, Exec Off, 6 Beacon St, Boston 02108.

AMERICAN COLLEGE HEALTH ASSOCIATION, Denver, Apr 27-30, 1976. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

AMERICAN COLLEGE OF PHYSICIANS, Philadelphia, Apr 5-8, 1976. Dr. Edward C Rosenow, Jr, 4200 Pine St, Philadelphia 19104.

AMERICAN COLLEGE OF SURGEONS, Boston, Apr 26-29, 1976. Frank Arado, 55 E Erie St, Chicago 60611.

■ AMERICAN COLLEGE OF SURGEONS, New Mexico-El Paso Chapter, El Paso, Apr 10-11, 1976. Dr. Charles M Lyon, 1900 N Oregon, El Paso 79902.

■ AMERICAN GERIATRICS SOCIETY, INC, Houston, Apr 21-22, 1976. 10 Columbus Circle, New York 10019.

DIGESTIVE DISEASE WEEK, Miami Beach, Fla, Apr 22-27, 1976. Fred Kern, Jr, Pres, 4200 E 9th Ave, Denver 80220.

AMERICAN BRONCHO-ESOPHAGOLOGICAL ASSOCIATION, Palm Beach, Fla, Apr 27-28, 1976. Dr. LW Pratt, Sec, 37 Lawrence Ave, Fairfield, Me 04937.

AMERICAN FERTILITY SOCIETY, Las Vegas, Nev, Apr 5-8, 1976. Dr. JC Weed, Med Dir, 1608 13th Ave S, Suite 101, Birmingham, Ala 35205.

AMERICAN MEDICAL ELECTROENCEPHALOGRAPHIC ASSOCIATION, Savannah, Ga, Apr 7-11, 1976. Dr. WA Stephenson, Sansum Medical Clinic, Inc, PO Drawer LL, Santa Barbara, Calif 93102.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Cincinnati, Apr 24-29, 1976. HN Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN OTOLOGICAL SOCIETY, Palm Beach, Fla, Apr 25-26, 1976. Dr. GD Taylor, Sec-Treas, 221 Marshall Taylor Dr Bldg, Jacksonville, Fla 32207.

AMERICAN SOCIETY FOR EXPERIMENTAL PATHOLOGY, Anaheim, Calif, Apr 11-16, 1976. Dr. GB Mider, Exec Off, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SOCIETY OF INTERNAL MEDICINE, Atlanta, Apr 29-May 2, 1976. 535 Central Tower Bldg, 703 Market St, San Francisco 94103.

ASSOCIATION FOR THE ADVANCEMENT OF PSYCHOANALYSIS, New York, Apr 13, 1976. Dr. M Rendon, Sec, 333 E 30 St, New York 10016.

■ HOUSTON SOCIETY OF CLINICAL PATHOLOGISTS, Houston, Apr 10, 1976. 103 Jesse H Jones Library Bldg, 1133 MD Anderson Blvd, Houston 77025.

NATIONAL CONFERENCE ON RURAL HEALTH, AMERICAN MEDICAL ASSOCIATION, Phoenix, Ariz, Apr 8-9, 1976. Dept of Rural and Community Health, AMA, Division of Medical Practice, 535 N Dearborn St, Chicago 60610.

NATIONAL COUNCIL ON ALCOHOLISM, Washington, DC, Apr 9-10, 1976. Suite 1720, 2 Park Ave, New York 10016.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, Houston, Apr 9-10, 1976. 319 Sam Houston State Office Bldg, Austin 78701.

MAY

AMERICAN ACADEMY OF MEDICAL DIRECTORS, San Francisco, May 6-7, 1976. Box 949, Alexandria, Va 22313.

AMERICAN CANCER SOCIETY, San Francisco, May 27-29, 1976. 777 3rd Ave, New York 10017.

■ AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, Dallas, May 10-13, 1976. Dr. Warren H Pearse, Exec Off, 1 E Wacker Dr, Suite 2700, Chicago 60601.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, Dallas, May 15, 1976. Dr. RC Jones, Sec, 5323 Harry Hines, Dallas 75235.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, McAllen, May 20-23, 1976. Geraldine Midgley, Exec Off, Box 1287, Uvalde 78801.

AMERICAN RED CROSS, Portland, Ore, May 9-12, 1976. Convention Office, American Red Cross, 431 18th St, NW, Washington, DC 20006.

AMERICAN SOCIETY FOR GASTROINTESTINAL ENDOSCOPY, Miami Beach, Fla, May 27-28, 1976. Charles B Slack, Inc, 6900 Grove Rd, Thorofare, NJ 08086.

■ ASSOCIATION OF AMERICAN PHYSICIANS, Texas Chapter, Dallas, May 5, 1976. Dr. George E Holladay, 525 Bryan St, Denton 76201.

CONFERENCE ON AMBULATORY MONITORING, Atlanta, May 20-21, 1976. Nancy Jacobsen, Conference Coordinator, 315 University District Bldg, 1107 NE 45th, Seattle, Wash 98105.

■ CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Dallas, May 7, 1976. Dr. Fratis L Duff, Dir, Tex Dept of Health Resources, 1100 W 49th, Austin 78756.

CONFERENCE ON CUTANEOUS TOXICITY, AMERICAN MEDICAL ASSOCIATION, Washington, DC, May 17-18, 1976. Dept of Drugs, AMA, 535 N Dearborn St, Chicago 60610.

■ FLYING PHYSICIANS ASSOCIATION, TEXAS CHAPTER, Dallas, May 6, 1976. Dr. Lawrence H Wilk, Pres, 1001 Louisiana 203, Corpus Christi 78404.

■ INTERNATIONAL COLLEGE OF SURGEONS, TEXAS STATE SURGICAL DIVISION, Dallas, May 6, 1976. Dr. Casey E Patterson, Pres, 6011 Harry Hines Blvd, Dallas 75235.

SOUTHEAST EMERGENCY MEDICINE CONGRESS, Atlanta, May 3-5, 1976. Registrar, 1919 Beachway Rd, Suite 5C, Jacksonville, Fla 32207.

■ SOUTHWEST ALLERGY FORUM, San Antonio, May 22-25, 1976. Dr. Peter B Kamin, 601 Oak Hills Medical Bldg, San Antonio 78229.

■ SOUTHWESTERN SURGICAL CONGRESS, Houston, May 3-6, 1976. Dr. Jack A Barney, Sec-Treas, 708 Physicians & Surgeons Bldg, Oklahoma City 73103.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Dallas, May 6, 1976. Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

■ TEXAS AIR-MEDICS ASSOCIATION, Dallas, May 6, 1976. Dr. Neall O Simpson, 111 S 18th, Waco 76701.

■ TEXAS ASSOCIATION OF NEUROLOGICAL SURGEONS, Dallas, May 7-8, 1976. Dr. Earl H Rafes, Pres, 3260 Fannin St, Beaumont 77701.

■ TEXAS ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Dallas, May 6, 1976. Dr. Marthalyn J Green, Pres, 1936 Amelia Ct, Dallas 75235.

■ TEXAS DERMATOLOGICAL SOCIETY, Dallas, May 8, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS DIABETES ASSOCIATION, Dallas, May 6-7, 1976. Dr. Sherman B Lindsey, Pres, Scott and White Clinic, Temple 76501.

■ TEXAS HOSPITAL ASSOCIATION, Dallas, May 16-20, 1976. Box 15587, Austin 78761.

■ **TEXAS MEDICAL ASSOCIATION, Annual Session, Dallas, May 6-9, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.**

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Dallas, May 7, 1976. Dr. Frank J Kelly, Sec-Treas, Box 647, Amarillo 79177.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Dallas, May 7-8, 1976. Dr. Whitney G Sampson, Pres, 537 W 20th St, Houston 77008.

■ TEXAS ORTHOPAEDIC ASSOCIATION, Dallas, May 8, 1976. Dr. E Burke Evans, Pres, UT Medical Branch, Galveston 77550.

■ TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Dallas, May 7-8, 1976. Dr. James L Baldwin, Pres, 712 N Washington, Dallas 75246.

■ TEXAS RHEUMATISM ASSOCIATION, Dallas, May 8, 1976. Dr. J Donald Smiley, Pres, 5323 Harry Hines, Dallas 75235.

■ TEXAS SOCIETY OF ANESTHESIOLOGISTS, Dallas, May 8-9, 1976. Dr. Cecil R Glass, Pres, Box 5587, Beaumont 77702.

■ TEXAS SOCIETY OF PATHOLOGISTS, INC, Dallas, May 9, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, Dallas, May 7-8, 1976. Dr. Jeff R Moore, Pres, Box 3755, Amarillo 79106.

■ UT MEDICAL BRANCH, Symposium on Philosophy and Medicine, Galveston, May 16-18, 1976. Dr. H Tristram Engelhardt, Jr, Institute for the Medical Humanities, UT Medical Branch, Galveston 77550.

JUNE

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Dallas, June, 1976. Dr. CB Shuey, Jr, Sec, 3500 Gaston Ave, Dallas 75246.

■ AMERICAN HEART ASSOCIATION, TEXAS CHAPTER, Houston, Jun 9-13, 1976. Box 9928, Austin 78766.

■ AMERICAN MEDICAL ASSOCIATION, Dallas, Jun 27-Jul 1, 1976. 535 N Dearborn, Chicago 60610.

AMERICAN SOCIETY OF INTERNAL MEDICINE, San Francisco, Jun 18-19, 1976. 535 Central Tower Bldg, 703 Market St, San Francisco 94103.

AMERICAN SOCIETY OF LAW AND MEDICINE, Boston, Jun 21-23, 1976. Dr. Elliot L Sagall, 454 Brookline Ave, Boston 02215.

EYE RESEARCH INSTITUTE OF RETINA FOUNDATION, Boston, Jun 17-19, 1976. Dr. H MacKenzie Freeman, 20 Staniford St, Boston 02114.

INTERNATIONAL CONGRESS ON GROUP MEDICINE, Paris, Jun 21-26, 1976. Domestic Coordinating Body, American Group Practice Association, 20 S Quaker Lane, Box 949, Alexandria, Va 22313.

■ NUECES COUNTY MEDICAL SOCIETY, Corpus Christi, Jun 10-11, 1976. Box 5280, Corpus Christi 78405.

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Las Vegas, Nev, Jun 13-16, 1976. Dr. Richard H Moiel, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77025.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Houston, Jun 15-17, 1976. Dr. A Bryan Spires, Southwest Tower Bldg, Suite 900, 211 E 7th St, Austin 78701.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 19-22, 1976. Box 456, Sunland Park, NM 88063.

AMERICAN ASSOCIATION FOR REHABILITATION THERAPY, INC, Cleveland, Jul 12-16, 1976. Box 98, N Little Rock, Ark 72116.

AMERICAN CANCER SOCIETY, COLORADO DIVISION, Denver, Colo, Jul 16-17, 1976. 1809 E 18th Ave, Denver, Colo 80218.

AMERICAN SOCIETY OF ORAL SURGEONS, Chicago, Jul 17-18, 1976. 211 E Chicago Ave, Ste 930, Chicago 60611.

INDIANA UNIVERSITY, Institute for Sex Research, Inc, Bloomington, Ind, Jul 21-30, 1976. 416 Morrison Hall, Indiana University, Bloomington, Ind 47401.

INSTITUTE FOR CONTINUING EDUCATION, Heidelberg/Mainz/Hamburg, W Germany, Jul 13-24, 1976. 2405 Westwood Ave, Box 11083, Richmond, Va 23230.

INTERNATIONAL UROLOGY CONGRESS, Johannesburg, South Africa, Jul 25-30, 1976. c/o Festivals & Conventions Trust (Pty) Ltd, Box 61326, Marshalltown, 2107 Transvaal, Rep of South Africa.

INTERNATIONAL CONGRESS OF HYPNOSIS AND PSYCHOSOMATIC MEDICINE, Philadelphia, Jul 1-3, 1976. Dr. Martin T Orne, The Institute of Pennsylvania Hospital, 111 N 49th St, Philadelphia 19139.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, Colo, Jul 23-24, 1976. 1764 Gilpin St, Denver, Colo 80210.

■ TEXAS REHABILITATION ASSOCIATION, Dallas, Jul 11-14, 1976. Box 20040, Dallas 75220.

AUGUST

■ AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, Houston, Aug 1-6, 1976. 1725 K St, NW, Washington, DC 20006.

AMERICAN ASSOCIATION OF FOUNDATIONS FOR MEDICAL CARE, Boston, Aug 7-12, 1976. Box 230, Stockton, Calif 95201.

■ AMERICAN PODIATRY ASSOCIATION, Dallas, Aug 12-17, 1976. 20 Chevy Chase Circle, NW, Washington, DC 20015.

■ AMERICAN SOCIETY OF PARASITOLOGISTS, San Antonio, Aug 22-27, 1976. UT Health Science Center at Dallas, Dallas 75235.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 8-13, 1976. 1818 Gaylord St, Denver 80206.

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION, Tokyo, Aug 22-28, 1976. c/o Japan Medical Women's Association, 19 Kawadacho, Ichigayan, Shinjuku-ku Tokyo.

TRANSPLANTATION SOCIETY, New York, Aug 22-28, 1976. Felix T Rapaport, New York University Medical Center, 560 First Ave (Room H-438), New York 10016.

SEPTEMBER

AMERICAN ACADEMY FOR CEREBRAL PALSY, Los Angeles, Sep 12-16, 1976. 1255 New Hampshire Ave NW, Room 1030, Washington, DC 20036.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Boston, Sep 20-23, 1976. 1740 W 92nd St, Kansas City, Mo 64114.

■ AMERICAN ACADEMY OF MEDICAL ADMINISTRATORS, Dallas, Sep 19-20, 1976. 6 Beacon St, Boston 02108.

AMERICAN CANCER SOCIETY-NATIONAL CANCER INSTITUTE, St. Louis, Sep 20-22, 1976. Dr. Sidney L Arje, American Cancer Society, 777 Third Ave, New York 10017.

AMERICAN COUNCIL OF MEDICAL STAFFS, New Orleans, Sep 24, 1976. 3422 Bienville St, New Orleans 70119.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Dearborn, Mich, Sep 30-Oct 2, 1976. 4137 Erie St, Willoughby, Ohio 44094.

AMERICAN FRACTURE ASSOCIATION, Acapulco, Mexico, Sep 5-10, 1976. Box 10202, Atlanta 30319.

■ AMERICAN HOSPITAL ASSOCIATION, Dallas, Sep 20-23, 1976. 840 N Lake Shore Dr, Chicago 60611.

AMERICAN PSYCHIATRIC ASSOCIATION, Atlanta, Sep 19-23, 1976. 1700 18th St, NW, Washington, DC 20009.

AMERICAN ROENTGEN RAY SOCIETY, Washington, DC, Sep 18-25, 1976. 20 N Wacker Dr, Chicago 60606.

AMERICAN SOCIETY OF PLASTIC & RECONSTRUCTIVE SURGEONS, Boston, Sep 26-Oct 1, 1976. 29 E Madison St, Ste 807, Chicago 60602.

NATIONAL ASSOCIATION OF NEIGHBORHOOD HEALTH CENTERS, INC, Atlanta, Sep 20-24, 1976. 1625 I St, NW, Ste 403, Washington, DC 20006.

SOCIETY FOR PEDIATRIC RADIOLOGY, Washington, DC, Sep 19-20, 1976. c/o Johns Hopkins Hospital, Baltimore 21205.

■ TEXAS PEDIATRIC SOCIETY, Dallas, Sep 23-25, 1976. Mary E Greene, 1801 N Lamar Blvd, Austin 78701.

can ALCOHOLISM be treated in 2 weeks?

The Dallas-Fort Worth area offers one of the most unique treatment programs for alcoholism that is available in the world today.

It is a **medical** program 100% controlled by physicians who daily deal with a variety of psychosomatic and psychiatric problems. It includes—

- **Detoxification and Withdrawal**
- **Conditioned Avoidance Therapy . . .** habituation to alcoholic beverages is rapidly intervened.
- **Cognitive-Emotive Feedback Pentothal Interview . . .** a newly devised procedure that lets the patient recognize cues to drink, reasons for thinking and feeling the way he does, and breaks down denial and other aberrant defense mechanisms.
- **New-Life Management . . . teaches** alternative behaviors; **teaches** patients how to become non-drinkers; **teaches** ways of dealing with stress, anxiety, depression and the desire for an alcoholic "high"; introduces patients to follow-up and support facilities and therapists in their own communities.
- Evaluation and Treatment of Concurrent Physiologic and Emotional Problems
- Family, Marital and Vocational Counseling

The program is a common sense one based on what we **know** about the biochemistry, physiology, sociology, and psychology of alcohol addiction. There is no mystique involved and unproven modalities are not utilized.

RESULTS: In a study of 1000 patients treated from October 1970 to October 1974, 48% have achieved 4 year abstinence and 55% total sobriety for at least one year.

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Call collect (817) 284-9217 for admission information

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A. F. Ennis, Jr., B. C. Crim and G. C. Desorcy, Suite 210, 712 N. Washington, Dallas 75246	Telephone (214) 821-4640
Richard B. Ross and Wayne L. Kirk, 1508 Hermann, Prof. Bldg., Houston 77025	Telephone (713) 797-9835
Michael C. Rollans, 408 GPM Bldg., South Tower, San Antonio 78216	Telephone (512) 344-5901

THE PSYCHIATRIC INSTITUTE OF MEXICO CITY

In beautiful Lomas de Chapultapec

- U.S. trained bilingual medical staff
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Treatment programs include:

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Alcohol Detoxification and Rehabilitation

Psychological Testing

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For information contact: Rod O'Connor, Administrator, Psychiatric Institute of Mexico City, Paseo de la Reforma 2600, Lomas de Chapultapec, Mexico 10, D.F. Affiliate of The Psychiatric Institutes of America.

12-hour claims
are nothing new.

12-hour relief is.

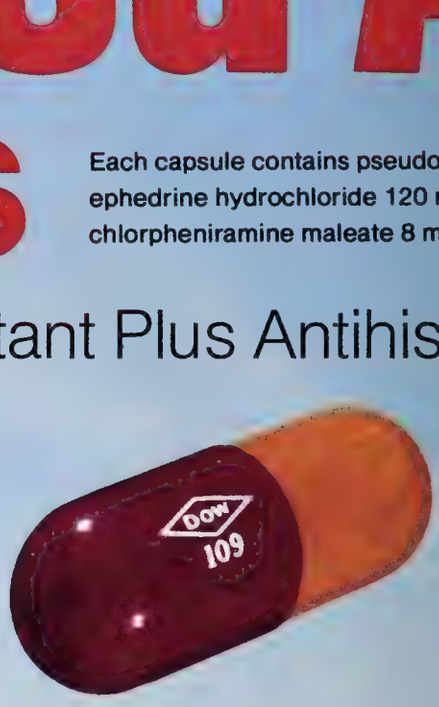
NEW

Novafed® A Capsules

Each capsule contains pseudo-ephedrine hydrochloride 120 mg. and chlorpheniramine maleate 8 mg.

Controlled-Release Decongestant Plus Antihistamin

It goes the distance.



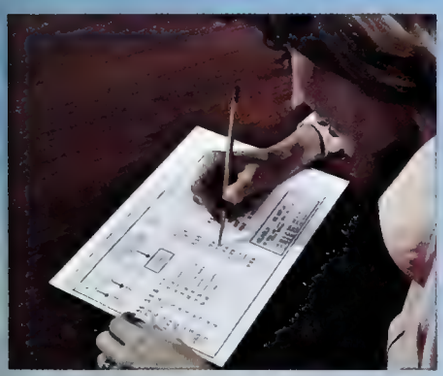
Clinical studies confirm full 12-hour effectiveness.

For years, patients have heard of drugs providing long-lasting relief. But after six or eight hours, they often run out of relief. And it's too soon to take the next dose.

Now, with Novafed A, Dow introduces a prescription capsule with 12-hour effectiveness in relieving allergy and hay fever symptoms. Placebo-controlled clinical studies show that the high level of decongestant in Novafed A provides relief for as long as 12 hours. At the same time, its antihistamine relieves the patient's itchy eyes and runny nose *without* the excessive dryness of anticholinergic agents.

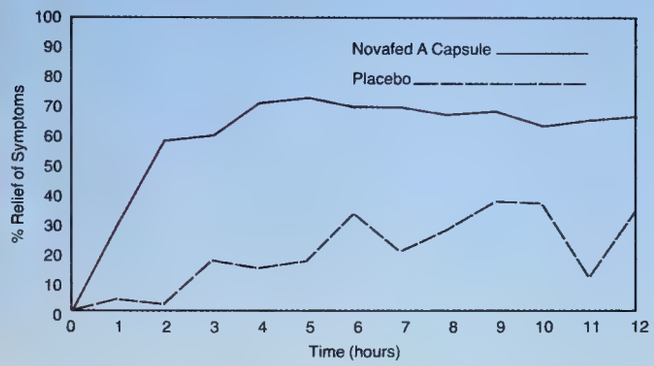
Prompt onset of effect is followed by full 12-hour relief.

(Please refer to the following page for bioavailability studies and prescribing information.)



Patients with severe pollen allergies were tested during hay fever season in a countryside environment and asked to rate severity of five different symptoms on a scale of 1 to 4.

Clinical Study: Degree of Relief from Itchy Eyes and Nose and Throat, Watery Eyes, Runny Nose*



*Unpublished data, Medical Department Files, Dow Pharmaceuticals, The Dow Chemical Company, Indianapolis, Indiana.

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Specialists in Cough and Cold Care

NEW

Novafed® A Capsules

Each capsule contains pseudoephedrine hydrochloride 120 mg. and chlorpheniramine maleate 8 m

Controlled-Release Decongestant Plus Antihistamine

It goes the distance.

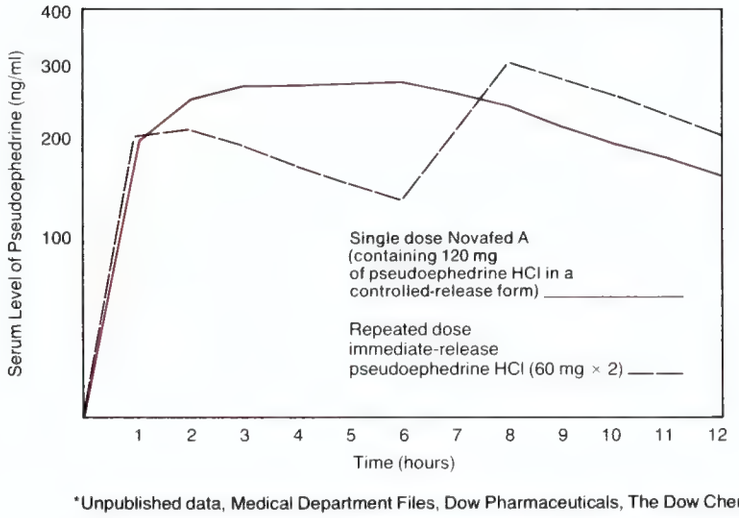
Prompt onset and sustained serum levels over 12 hours

A bioavailability study confirmed that the sustained 12-hour action of Novafed A was comparable to that of immediate-release medication taken at 6-hour intervals.

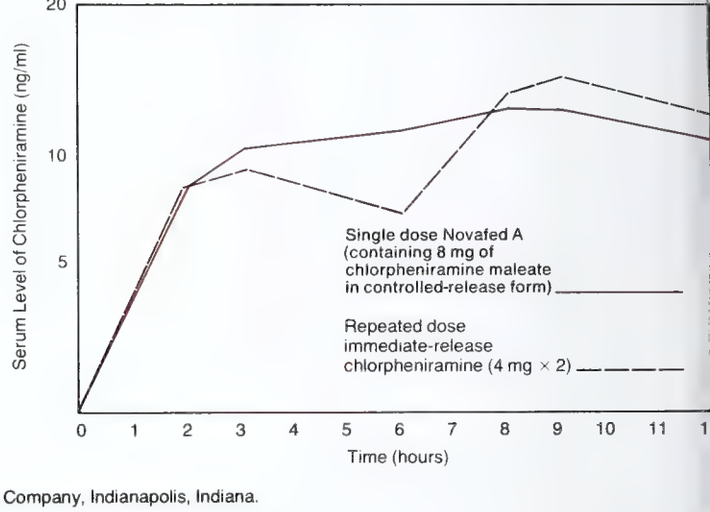
The chart at the left shows the serum levels of pseudoephedrine. Initial serum levels following one Novafed A Capsule were comparable to those following a single dose of 60 mg. pseudoephedrine hydrochloride in an immediate-release form. Serum levels of pseudoephedrine over a 12-hour period following a single dose of Novafed A were also comparable to those obtained by an immediate-release form taken every 6 hours.

The chart at the right shows the serum levels of chlorpheniramine. Initial serum levels following one Novafed A Capsule were comparable to those following a single dose of 4 mg. chlorpheniramine maleate in an immediate-release form. Serum levels of chlorpheniramine over a 12-hour period following a single dose of Novafed A were also comparable to those obtained by an immediate-release form taken every 6 hours.

Comparison of Mean Serum Levels of Pseudoephedrine Following Novafed A and an Immediate-Release Reference Formulation*



Comparison of Mean Serum Levels of Chlorpheniramine Following Novafed A and an Immediate-Release Reference Formulation*



*Unpublished data, Medical Department Files, Dow Pharmaceuticals, The Dow Chemical Company, Indianapolis, Indiana.

DESCRIPTION: Each NOVAFED A capsule contains 120 mg. of pseudoephedrine hydrochloride and 8 mg. of chlorpheniramine maleate. The specially formulated pellets in each capsule are designed to provide continuous therapeutic effect for about 12 hours. Nearly one-half of the active ingredients is released soon after administration and the remainder is released slowly over the remaining time period.

ACTIONS: NOVAFED A combines the action of a nasal decongestant, pseudoephedrine hydrochloride, and an antihistamine, chlorpheniramine maleate. These ingredients are combined to provide prompt and sustained nasal and upper respiratory decongestant and antihistaminic action.

INDICATIONS: NOVAFED A is indicated for the relief of nasal congestion and eustachian tube congestion associated with the common cold, sinusitis and acute upper respiratory infections. It is also indicated for perennial and seasonal allergic rhinitis, vasomotor rhinitis, allergic conjunctivitis due to inhalant allergens and foods and for mild, uncomplicated allergic skin manifestations of urticaria and angioedema. Decongestants in combination with antihistamines have been used for many years to relieve eustachian tube congestion associated with acute eustachian salpingitis, aerotitis media, acute otitis media and serous otitis media. NOVAFED A may be given concurrently, when indicated, with analgesics and antibiotics.

CONTRAINDICATIONS: Symphathomimetic amines are contraindicated in patients with severe hypertension, severe coronary artery disease, and in patients on MAO inhibitor therapy. Antihistamines are contraindicated in patients with narrow-angle glaucoma, urinary retention, peptic ulcer, during an asthmatic attack, and in patients receiving MAO inhibitors.

Children under 12: NOVAFED A controlled-release capsules should not be used in children less than 12 years of age.

Nursing Mothers: Pseudoephedrine is contraindicated in nursing mothers because of the higher than usual risk for infants from sympathomimetic amines.

Hypersensitivity: This drug is contraindicated in patients with hypersensitivity or idiosyncrasy to sympathomimetic amines or antihistamines. Patient idiosyncrasy to adrenergic agents may be manifested by insomnia, dizziness, weakness, tremor or arrhythmias.

WARNINGS: Sympathomimetic amines should be used judiciously and sparingly in patients with hypertension, diabetes mellitus, ischemic heart disease, increased intraocular pressure, hyperthyroidism, or prostatic hypertrophy. Sympathomimetics may produce central nervous system stimulation and convulsions or cardiovascular collapse with accompanying hypotension.

Antihistamines may impair mental and physical abilities required for the performance of potentially hazardous tasks, such as driving a vehicle or operating machinery, and mental alertness in children. Chlorpheniramine maleate has an atropine-like action and should be used with caution in patients with increased intraocular pressure, hyperthyroidism, cardiovascular disease, hypertension or in patients with a history of bronchial asthma.

Do not exceed recommended dosage.

Use in Pregnancy: The safety of pseudoephedrine for use during pregnancy has not been established.

Use in Elderly: The elderly (60 years and older) are more likely to have adverse reaction to sympathomimetics. Overdosage of sympathomimetics in this age group may cause hallucinations, convulsions, CNS depression, and death. Therefore, safe use of a short-acting sympathomimetic should be demonstrated in the individual elderly patient before considering the use of a sustained-action formulation.

PRECAUTIONS: This drug should be used with caution in patients with diabetes, hypertension, cardiovascular disease and hyperreactivity to ephedrine. The antihistaminic may cause drowsiness and ambulatory patients who operate machinery or motor vehicles should be cautioned accordingly.

ADVERSE REACTIONS: Hyperreactive individuals may display ephedrine-like reactions such as tachycardia, palpitations, headache, dizziness, or nausea. Patients sensitive to antihistamines may experience mild sedation.

Sympathomimetic drugs have been associated with certain untoward reactions including fear, anxiety, tenseness, restlessness, tremor, weakness, pallor, respiratory difficulty, dysuria, insomnia, hallucinations, convulsions, CNS depression, arrhythmias, and cardiovascular collapse with hypotension.

Possible side effects of antihistamines are drowsiness, restlessness, dizziness, weakness, dry mouth, anorexia, nausea, headache and nervousness, blurring of vision, heartburn, dysuria and very rarely, dermatitis.

DRUG INTERACTIONS: MAO inhibitors and beta adrenergic blockers increase the effect of sympathomimetics. Sympathomimetics may reduce the antihypertensive effects of methyldopa, mecamylamine, reserpine and veratrum alkaloids. Concomitant use of antihistamines with alcohol, tricyclic antidepressants, barbiturates and other central nervous system depressants may have an additive effect.

DOSAGE AND ADMINISTRATION: One capsule every 12 hours. Do not give to children under 12 years of age.

CAUTION: Federal law prohibits dispensing without prescription.

HOW SUPPLIED: NOVAFED A is supplied in red and orang colored hard gelatin capsules, monogrammed with the Dow diamond followed by the number 109, in bottles of 100.

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Specialists in cough and cold care

CONTINUING EDUCATION COURSES

APRIL

Arthritis and Rheumatism

Title: What's New in Arthritis Diagnosis and Treatment
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Apr 10-11, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 10 total course hours
Fee: To be determined
Designed For: General practitioners; Specialists
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, enrollee performs procedure, lecture, live clinic, panel, patient demonstration, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Family Medicine

Title: Current Radiology for the Family Physician
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Apr 3-4, 1976
Duration: Continuous, 2 days, 5 hours instruction per day
Fee: $75
Designed For: General practitioners; Specialists
Enrollment: Maximum, 125
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Internal Medicine

Title: Medical Surgical Seminar
Sponsor: Travis Clinic Foundation, Jacksonville
Location of Course: Travis Clinic Foundation, Jacksonville
Date: April, 1976
Duration: 1 day
Fee: None
Designed For: General practitioners; Specialists in Internal Medicine, Surgery
Enrollment: Maximum, 60
Credit: 6 hours, AAFP Elective
Teaching Methods: Audiovisual materials, clinical conference, open question
Contact: Dr. James H Pesnell, Travis Clinic Foundation, Loop 456, Jacksonville 75766

Title: The Dallas Advanced Seminars in Internal Medicine
Sponsor: A Webb Roberts Center for Continuing Education, Dallas
Date: Apr 26-29, 1976
Duration: Continuous, 4 days, 6 hours instruction per day
Fee: $175
Designed For: General practitioners; Specialists in Internal Medicine
Credit: 24 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Obstetrics & Gynecology

Title: Gynecological Cytopathology
Sponsors: Texas Society of Cytology; A Webb Roberts Center for Continuing Education
Location of Course: Beasley Auditorium, Baylor University Medical Center, Dallas
Date: Apr 24, 1976
Duration: 8 hours
Designed For: Specialists in Pathology, Obstetrics & Gynecology
Teaching Methods: Audiovisual materials, lecture
Contact: Dr. George J Race, Assoc Dean, A Webb Roberts Center for Continuing Education, 3500 Gaston, Dallas 75246

Ophthalmology

Title: 13th Annual Baylor Ophthalmology Residents Alumni Meeting
Sponsor: Baylor College of Medicine, Dept of Ophthalmology, Houston
Location of Course: Baylor College of Medicine, Houston
Dates: Apr 2-3, 1976
Duration: Continuous
Fee: To be determined
Designed For: Specialists
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Orthopedic Surgery

Title: 12th Annual Orthopedic Symposium
Sponsors: Dept of Orthopedic Surgery, St. Luke's Episcopal Hospital; Baylor College of Medicine
Location of Course: St. Luke's-Texas Children's Hospital Auditorium, Houston
Dates: Apr 22-24, 1976
Fee: $150
Contact: Dr. Joseph Barnhart, Houston Orthopedic Clinic, 5620 Greenbriar, University Medical Center, Houston 77005

Psychiatry

Title: Group Psychotherapy
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio

Date: Apr 3-May 15, 1976
Duration: Intermittent, 7 Saturdays, 3 hours instruction per day, 21 total course hours
Fee: $125
Designed For: Specialists
Enrollment: Maximum, 12
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, open question, patient demonstration, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: WISC-R Workshop
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Apr 10, 1976; May 1, 1976
Duration: Continuous, 1 day, 7 hours instruction
Fee: $35
Designed For: Specialists
Enrollment: Minimum, 30; Maximum, 50
Teaching Methods: Audiovisual materials, open question, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Urology

Title: Recent Advances in Nephrology
Sponsors: American College of Physicians; UT Medical Branch
Location of Course: UT Medical Branch, Galveston
Dates: Apr 12-14 ,1976
Duration: 3 days
Fee: ACP members, FACP, Residents and Research Fellows, $100; Nonmembers, $150; ACP Associates, $50
Designed For: Specialists in Internal Medicine, Nephrology
Teaching Methods: Lecture, panel
Contact: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine St, Philadelphia 19104

Other: Community Medicine

Title: Medical Ethics Forum
Sponsors: Baylor College of Medicine; Institute of Religion
Location of Course: Texas Medical Center, Houston
Date: April, 1976
Duration: Intermittent, 1 day per week, 7 weeks
Fee: To be determined
Designed For: General practitioners; Specialists
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Other

Title: Biofeedback Methods and Procedures in Clinical Practice—A Second Level Course
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Date: Apr 24, 1976
Duration: 1 day, 7 hours instruction
Fee: $90
Designed For: General practitioners
Credit: 7 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, patient demonstration, seminar
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

MAY

Anesthesiology

Title: 23rd Annual Anesthesiology Review Course
Sponsor: Society of Air Force Anesthesiologists, Lackland AFB
Location of Course: Convention Center, Hemisfair Plaza; Hilton Hotel San Antonio (headquarters)
Dates: May 24-28, 1976
Duration: Continuous, 5 days, 30 total course hours
Fee: $100
Designed For: Specialists in Anesthesiology
Credit: 30 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Dr. Francis J Dannemiller, Program Director, Society of Air Force Anesthesiologists, PSC 8, Box 368865, Lackland AFB 78236

Chest Disease

Title: Wheezing—Obstructive Lung Disease in Adults and Children
Sponsors: American College of Chest Physicians, Chicago; Baylor College of Medicine
Location of Course: Texas Children's Hospital, Texas Medical Center, Houston
Dates: May 13-15, 1976
Duration: Continuous, 3 days
Fee: Members, $125; Nonmembers, $125; Residents, $50
Designed For: General practitioners; Specialists in Internal Medicine, Pediatrics, Family Medicine
Enrollment: To be determined
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question

Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Family Medicine

Cancelled: Anesthesia for the Family Physician, UT Health Science Center at San Antonio, May 5-7, 1976

Postponed: Office Gynecology, UT Health Science Center at San Antonio, May 22-23, 1976

General Medicine

Title: Course in Nuclear Medicine—Its Use in Defining Disease
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: UT Health Science Center at Houston
Dates: May 6, 13, 20, & 27, 1976
Duration: Intermittent, 2 hours
Fee: $35
Designed For: Full- or part-time specialists in Nuclear Medicine; Postgraduate traineeship
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award; Society of Nuclear Medicine; American College of Radiology; American Society of Clinical Pathologists
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Occupational Medicine

Title: Texas Occupational Medical Association Scientific Program
Sponsor: Texas Occupational Medical Association
Location of Course: Fairmont Hotel, Dallas
Date: May 7, 1976
Duration: 1 day, 3 hours
Fee: None
Designed For: Full- or part-time specialists in Occupational Medicine
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Francis J Kelly, Secretary, Texas Occupational Medical Association, Box 647, Amarillo 79177

Pediatrics

Title: Pediatrics for the Practitioner
Sponsor: UT Health Science Center at San Antonio
Location of Course: St. Anthony Hotel; UT Health Science Center at San Antonio; Santa Rosa Children's Hospital
Dates: May 21-23, 1976
Duration: Continuous, 3 days
Fee: $125
Designed For: General practitioners, Specialists
Enrollment: Maximum, 150
Credit: 13 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Physical Medicine and Rehabilitation

Title: Tenth Comprehensive Review Course in Physical Medicine and Rehabilitation
Sponsors: Veterans Administration Hospital, Houston; Baylor College of Medicine, Dept of Physical Medicine, Houston
Location of Course: Auditorium, Texas Women's University College of Nursing, Houston
Dates: May 17-27, 1976
Duration: Continuous, 10 days, 2 weeks, 8 hours instruction per day, 80 total course hours
Fee: None
Designed For: General practitioners; Specialists
Enrollment: Minimum, 30; Maximum, 100
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, live clinic, seminar
Contact: Dr. William P Blocker, Jr, Chief, Rehabilitation Medicine Service, Veterans Administration Hospital, 2002 Holcombe Blvd, Houston 77211

Psychiatry

Cancelled: WISC-R Workshop, UT Health Science Center at San Antonio, May 1, 1976

Title: Colloquium in Psychological Diagnosis
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: May 15-16, 1976
Duration: Continuous, 2 days, 5-6 hours instruction per day, 11 total course hours
Fee: $75
Designed For: Specialists
Credit: 11 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, enrollee observes procedure, open question, television
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Other: Gero-Psychiatry

Title: Side Effects and Implications for Use of Neuroleptics in Gero-Psychiatry and Community Care Aspects of Gero-Psychiatric Patients

Sponsors: Texas Department of Mental Health and Mental Retardation; Baylor College of Medicine, Houston
Location of Course: Wichita Falls Country Club, Wichita Falls
Date: Apr 24, 1976
Duration: 1 day
Fee: To be determined
Designed For: General practitioners; Mental health professionals
Teaching Methods: Lecture, discussion
Contact: Office for Medical Services Continuing Education, Texas Department of Mental Health and Mental Retardation, Box 12668, Capitol Station, Austin 78711

Other: Alcoholism

Title: Workshop on Alcoholism and Drug Abuse: D_x — R_x
Sponsors: Texas Department of Mental Health and Mental Retardation; Baylor College of Medicine, Houston
Location of Course: Kerrville State Hospital, Kerrville
Date: May 13, 1976
Duration: 1 day
Fee: To be determined
Designed For: General practitioners; Mental health professionals
Teaching Methods: Lecture, discussion
Contact: Office for Medical Services Continuing Education, Texas Department of Mental Health and Mental Retardation, Box 12668, Capitol Station, Austin 78711

Dallas

Get Your Brand of Continuing Medical Education (C.M.E.) At the AMA's 125th Annual Convention, June 26-30, 1976

Dallas is many things to many people—a center of high fashion, finance, brainpower, big money, sports events, conventions, art, theater....

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C.M.E. for Credit—and most of it, except for postgraduate courses, free

To help you fulfill C.M.E. requirements for the AMA Physician's Recognition Award and your state or specialty society, this Annual Meeting offers many opportunities—113 in fact—to earn Category I credits. You'll have your choice of 57 postgraduate courses and the majority of 47 scientific sessions are classed for Category I. Hour-for-hour credit will also be given at the Live Teaching Clinic, Pulmonary Function, Dialogue, and at the 8 telecourses offered in the Convention Center and the Dallas hotels. (The AMA will provide you with a certificate of attendance; make sure you report your credits to your state or specialty society.)

Other Highlights

A majority of physicians regard the exhibit area as one of the most important features of AMA meetings. If you happen to be one who values this one-to-one peer communication with exhibitors, Dallas won't disappoint you. There will be 300 exhibits, evenly divided between scientific and industrial. Last, but not least, is the 18th National Conference on the Medical Aspects of Sports. Every year it gets bigger and better—you won't want to miss this year's Conference.

(Please see page F for the Housing Form hotel-motel details and Dallas map)

Detach, fill out, and return this with your postage, please.

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c/o Dallas Chamber of Commerce
Convention & Tourism Division
1507 Pacific Avenue
Dallas, TX 75201

Please print or type four choices:

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2nd _____

3rd _____

4th _____

Please enter my reservation at the above hotel/motel for:

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Twin(s) ___at $ _____

Suite(s)

1 Bedroom ___at $ _____ 2 Bedroom ___at $ _____

Please add 6% for the Municipal Tax; if your rate requested is not available, the next highest rate will be assigned. **DO NOT** send your request directly to the hotel; it will only delay your confirmation. Kindly make all necessary changes and cancellations directly with the Housing Bureau in Dallas, and be sure and specify your time of arrival, as well as the date. If you are an Industrial Exhibitor, please specify your firm's name and the list of all the occupants for all of the rooms that you are reserving.

CONFIRMATIONS WILL BE MAILED UP TO JUNE 11, 1976.

Room will be occupied by:

Name _____
(Please print or type)

Firm _____

Address _____

City/State/Zip Code _____

Office Phone Number ( ) _____

Additional Occupants (List ages of children, if any)

_____

Arrival Date _____ at AM/PM/ Departure Date _____

Get Your Brand of Continuing Medical Education (C.M.E

At the AMA's 125th Annual Convention,

June 26-30, 1976

SCIENTIFIC PROGRAM

Saturday/June 26, 1976
7:30 AM-Noon, Category I (5-hour, 1-day course: $50)
A-48. Basic Life Support (Cardiopulmonary Resuscitation CPR)

8:30 AM-Noon & 2:00-5:30 PM • 18th National Conference on the Medical Aspects of Sports; Category I ($32 for entire program, including luncheon)
A-58. Conference only ($25, no luncheon; 7 hours credit)
A-59. Luncheon only ($7, no credit)

9:00 AM-Noon, Category I (3-hour courses: $30)
A-16. Basic Electrocardiography
A-47. Radioimmunoassay in Diagnostic Medicine

9:00 AM-Noon & 2:00-5:00 PM, Category I (6-hour, 1-day courses: $60)
A-1. Acid-Base, Fluid, & Electrolyte Balance
A-2. Bronchogenic Carcinoma
A-3. Cutaneous Surgery for the Dermatologist
A-4. Fluids & Electrolytes in Children
A-5. How to Sew
A-6. Drugs of the Decade
A-7. Office ENT for the Family Physician
A-8. Program in Human Sexuality Spouses Invited
A-9. Hand Injuries
A-10. Office Urology for Non-Urologists
A-11. Ophthalmoscopy for Non-Ophthalmologists
A-12. Preoperative, Intraoperative, & Postoperative Care
A-13. Total Care of the Burn Patient
A-14. Musculoskeletal Emergencies
A-57. Bedside Clinics in Neurology

1:00-5:30 PM, Category I (5-hour, 1-day course: $50)
A-49. Basic Life Support (Cardiopulmonary Resuscitation -- CPR)

2:00-5:00 PM, Category I (3-hour courses: $30)
A-17. Cardiac Arrhythmias
A-18. Head Trauma Management for Emergency Room Physicians

Saturday & Sunday, June 26-27, 1976
9:00 AM-5:00 PM on Saturday & 9:00 AM-Noon on Sunday, Category I (11-hour, 2-day course: $130)
A-15. Advanced Public/Speaking Seminar

Sunday/June 27, 1976
9:00 AM-Noon, Category I (3-hour courses: $30)
A-34. Cardiac Arrhythmias
A-56. Live Case Presentations for Dermatologists

9:00 AM-Noon & 2:00-4:00 PM, Category I (5-hour, 1-day course: $50)
A-33. Exercise in the Diagnosis, Prevention, and Rehabilitation of Ischemic Heart Disease

9:00 AM-Noon & 2:00-5:00 PM, Category I (6-hour, 1-day courses: $60)
A-19. Acid-Base, Fluid, & Electrolyte Balance
A-20. Bedside Clinics in Neurology
A-21. Clinical Occupational Medicine for Community Physicians
A-22. Dermatology for Non-Dermatologists
A-23. Diagnosis & Management of Renal Diseases
A-24. Management of Acute Respiratory Failure
A-25. Office Orthopedics for the Non-Orthopedist
A-26. How to Sew
A-27. Life-Threatening Injuries: Their Emergency Management
A-28. Advanced Workshop in Sex Therapy -Prerequisite: Basic Sexuality Workshop
A-29. Pediatric Emergencies
A-30. Refresher Course for Recovery Room Nurses
A-31. The Physician in Mid-Career Experiential Learning, including Sensitivity Training
A-32. Writing for Scientific Journals
A-55. Day-to-Day Problems with Diabetes

2:00-5:00 PM, Category I (3-hour course: $30)
A-54. Refresher Course in Dermatopathology

Sunday & Monday/June 27-28, 1976
7:30 AM-Noon & 1:00-5:30 PM on Sunday & 7:30 AM-Noon on Monday, Category I (12-hour, 2-day course: $120—Prerequ site: Preliminary study required & Basi Life Support course)
A-52. Advanced Life Support (Cardio pulmonary Resuscitation CPR)

Monday/June 28, 1976
1:00-5:30, Category I (5-hour, 1-da course: $50)
A-50. Basic Life Support (Cardiopu monary Resuscitation—CPR)

Monday & Tuesday/June 28-29, 197(
7:30-9:00 AM, Category I (3-hour, 2-da course: $30)
A-46. Immunotherapy in Allergic Di ease

Monday, Tuesday, & Wednesday June 28-30, 1976
7:30-9:00 AM, Category I (5-hour, 3-da courses: $50)
A-35. Anesthesiology for Non-Anesth siologists
A-36. Antibiotic Therapy in Children
A-37. Clinical Biofeedback Traini Course
A-38. Common Errors in Emergen Wound Management
A-40. Office & Hospital Management Anorectal Disease
A-41. Reproductive Endocrinology
A-42. Chronic Lung Disease
A-43. Shock, Fluids, & Electrolytes
A-44. Urologic Pathology

Tuesday & Wednesday June 29-30, 1976
7:30 AM-Noon & 1:00-5:30 PM on Tuesd & 7:30 AM-Noon on Wednesday, Categor (12-hour, 2-day course: $120—Prereq site: Preliminary study required & Ba Life Support course)
A-53. Advanced Life Support (Card pulmonary Resuscitation—CPF

Wednesday/June 30, 1976
1:00-5:30 PM, Category I (5-hour, 1-c course: $50)
A-51. Basic Life Support (Cardiopuln nary Resuscitation—CPR)

AMA Auxiliary Activities
For complete details of Auxiliary act ties, please refer to the April 19 C vention issue of *JAMA*.

D

American Medical Association
535 North Dearborn Street
Chicago, Illinois 60610

Advance Registration

AMA's 125th ANNUAL CONVENTION • JUNE 26-30, 1976
DALLAS, TEXAS, CONVENTION CENTER

Please print and return to:
AMA Department of Registration Services,
535 N. Dearborn St.,
Chicago, IL 60610
or direct phone inquiries to:
AMA Department of Registration Services at (312) 751-6187.

Advance Registration • To receive your Advance Registration Card, this coupon must arrive at the AMA by May 21, 1976. (After this date, please register at the Convention Center in Dallas, Tex.) Your Advance Registration Card will be sent to you on June 4, 1976, unless you request an earlier mailing date.

General Registration— AMA members and their guests, no fee.
Non-member physicians, $35; their guests, $10 per person. Medical students, interns, residents, nurses, and foreign physicians—no fee.

Does not include C.M.E. Course Registration Fees

I am a member of the AMA through the following State Medical Association or government service _____ .

In accordance with the AMA Bylaws, I hold active membership in the AMA, and I wish to vote in the Scientific Section that I have checked: ⟶

01 ☐ Allergy
02 ☐ Anesthesiology
26 ☐ Cardiovascular Diseases
05 ☐ Clinical Pharmacology & Therapeutics
20 ☐ Colon & Rectal Surgery
03 ☐ Dermatology
04 ☐ Diseases of the Chest
28 ☐ Emergency Medicine
07 ☐ Family & General Practice
11 ☐ Federal & Military Medicine
06 ☐ Gastroenterology
08 ☐ General Surgery
09 ☐ Internal Medicine
29 ☐ Nuclear Medicine
24 ☐ Neurological Surgery
25 ☐ Neurology
13 ☐ Obstetrics & Gynecology
14 ☐ Ophthalmology
15 ☐ Orthopedic Surgery
10 ☐ Otorhinolaryngology
16 ☐ Pathology
17 ☐ Pediatrics
18 ☐ Physical Medicine & Rehabilitation
27 ☐ Plastic, Reconstructive, & Maxillofacial Surgery
19 ☐ Preventive Medicine
12 ☐ Psychiatry
21 ☐ Radiology
22 ☐ Urology

TMA

C.M.E. Course Registration

Please note: Fee schedule for each course • Please circle the course(s) code(s) of your choice, making very sure you indicate your choice for each day in your order of preference. If the minimum course registration is not attained for your first choice, or if the course is full, one of your alternate choices will be substituted. The course codes correspond to the listing and fees shown on the facing page. To receive your Advance Registration Card and tickets for your choice(s) of scientific courses, **this coupon must arrive with your remittance at the AMA by May 21, 1976;** after this date registrants are requested to come to the **Postgraduate Course Registration Desk in the Dallas Convention Center** to register. The **advance credentials, tickets, etc., will be sent to you on June 4, 1976,** unless you request an earlier date. Please make a check or money order payable to the American Medical Association.

NOTE: All medical students, interns, and residents are entitled to a 50% discount on course registration fees ($10 per credit hour is standard rate—meals excluded).

Name _____

Office Address _____

City/State/Zip Code _____

Office Phone No. ( ) _____ _____

My remittance of $_____ is enclosed in the form of a check or money order payable to the American Medical Association to cover the registration and course fees that I have indicated on this form.

Code No.	Fee Cited	Cklist.	Hours
A-48	$ 50	_____	5
A-58	25	_____	7
A-59	7	_____	—
A-16	30	_____	3
A-47	30	_____	3
A-1	60	_____	6
A-2	60	_____	6
A-3	60	_____	6
A-4	60	_____	6
A-5	60	_____	6
A-6	60	_____	6
A-7	60	_____	6
A-8	60	_____	6
A-9	60	_____	6
A-10	60	_____	6
A-11	60	_____	6
A-12	60	_____	6
A-13	60	_____	6
A-14	60	_____	6
A-57	60	_____	6
A-49	50	_____	5
A-17	30	_____	3
A-18	30	_____	3

Sat., June 26, 1976
1st Choice ___ ;2nd Choice ___ ;3rd Choice ___

A-15	130	_____	11

Sat.-Sun., June 26-27, 1976

Code No.	Fee Cited	Cklist.	Hours
A-34	$ 30	_____	3
A-56	30	_____	3
A-33	50	_____	5
A-19	60	_____	6
A-20	60	_____	6
A-21	60	_____	6
A-22	60	_____	6
A-23	60	_____	6
A-24	60	_____	6
A-25	60	_____	6
A-26	60	_____	6
A-27	60	_____	6
A-28	60	_____	6
A-29	60	_____	6
A-30	60	_____	6
A-31	60	_____	6
A-32	60	_____	6
A-55	60	_____	6
A-54	30	_____	3

Sun., June 27, 1976
1st Choice ___ ;2nd Choice ___ ;3rd Choice ___

A-52	120	_____	12

Sun.-Mon., June 27-28, 1976

A-50	50	_____	5

Mon., June 28, 1976

A-46	30	_____	3

Mon.-Tues., June 28-29, 1976

Code No.	Fee Cited	Cklist.	Hours
A-35	$ 50	_____	5
A-36	50	_____	5
A-37	50	_____	5
A-38	50	_____	5
A-40	50	_____	5
A-41	50	_____	5
A-42	50	_____	5
A-43	50	_____	5
A-44	50	_____	5

Mon., Tues., Wed., June 28, 29, 30
1st Choice ___ ;2nd Choice ___ ;3rd Choice ___

A-53	120	_____	12

Tues.-Wed., June 29-30, 1976

A-51	50	_____	5

Wed., June 30, 1976

Subtotal = In Fees = $_____ & Hrs. ____

$35 Per Non-Member $ _____

$10/Non-Mem. Guest $_____

TOTAL = $_____

E

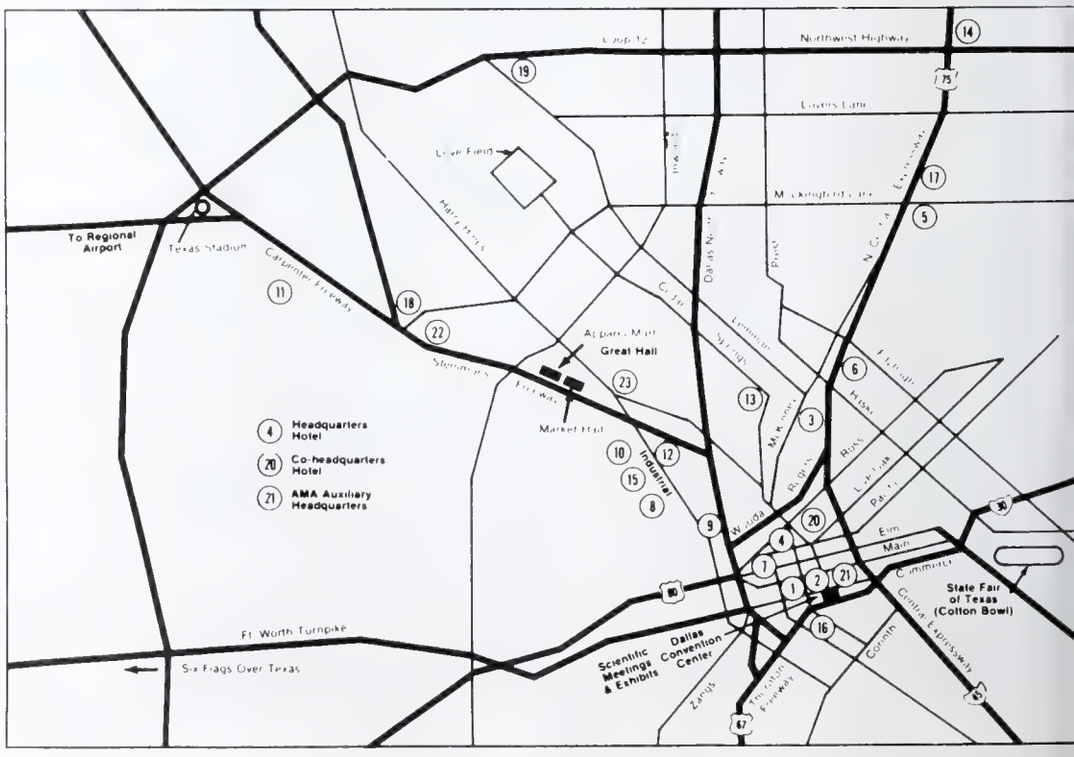
125th AMA Annual Convention
June 26-30, 1976/Dallas, Texas

AMA Housing Bureau
c/o Dallas Chamber of Commerce
Convention & Tourism Division
1507 Pacific Avenue
Dallas, TX 75201

Housing Form

Key #	Hotel/Motel	Single	Double	Twin	Suite
1.	Adolphus Hotel	$22.00-30.00	$26.00-34.00	$30 00-38 00	$ 75 up (1 Bedroom) 115 up (2 Bedrooms)
2.	Baker Hotel	20.00-27.00	25 00-32.00	28.00-35.00	60 up (1 Bedroom 110 up (2 Bedrooms)
3	Downtowner Inn	14.00-17.00	16.00-19.00	19 50-22 50	No Suites
19	Dunfey's Royal Coach	24.00-30.00	33.00-41.00	33.00-40.00	55 up (1 Bedroom) 118 up (2 Bedrooms)
4.	**Fairmont Hotel**	**HEADQUARTERS HOTEL**		**NO ROOMS AVAILABLE**	
5	Hilton Inn	23.00-33.00	33.00-46.00	33.00-46 00	90 up (1 Bedroom) 130 up (2 Bedrooms)
6.	Holiday Inn Central	17.00	20.50	23.00	No Suites
7.	Holiday Inn Downtown	21.00-23.00	25.00-27.00	27.00-29.00	50 up (1 Bedroom) 80 up (2 Bedrooms)
8.	Holiday Inn Market Center	16.00-18.00	22.00-24.00	22.00-24.00	No Suites
9.	Hyatt House	30.00	35.00	40.00	65 up (1 Bedroom) 100 up (2 Bedrooms)
10.	La Quinta Market Center	14.00	16.50	18.50	No Suites
11.	Le Baron Hotel	26.00-30.00	32.00-36.00	32.00-36.00	100 up (1 Bedroom)
12.	Marriott Motor Hotel	24.00-32.00	29.00-42.00	29.00-42.00	110 up (1 Bedroom) 150 up (2 Bedrooms)
13.	Melrose Hotel	16.00-20.00	22.00-25.00	24.00-32.00	40 up (1 Bedroom) 60 up (2 Bedrooms)
14.	North Park Inn	18.00-25.00	24.00-30.00	28.00-34.00	45 up (1 Bedroom) 65 up (2 Bedrooms)
15.	Quality Inn	20.00	22.50-26.50	24.50-26.50	No Suites
17	Ramada Inn Central	22.00-27.00	31.00-36.00	31.00-36.00	No Suites
16.	Ramada Inn Conv. Center	30.00	38.00	38.50	,77 up (1 Bedroom)
18.	The Registry Hotel	27.00-29.00	33.00-35.00	33.00-35.00	60 up (1 Bedroom) 85 up (2 Bedrooms)
20.	**Sheraton-Dallas Hotel**	**CO-HEADQUARTERS HOTEL**		**NO ROOMS AVAILABLE**	
21.	Statler Hilton Hotel **AMA AUXILIARY HEADQUARTERS**	24.00-39.00	32.00-49.00	36.00-49.00	80 up (1 Bedroom) 125 up (2 Bedrooms)
22.	Stemmons Inn	18.00-19.00	21.00-22.00	24.00-26.00	No Suites
23.	Travelodge Market Center	20.00-23.00	23.00-28.00	23.00-28.00	45 up (1 Bedroom)

THE ABOVE RATES ARE SUBJECT TO A 6% MUNICIPAL TAX.



Dallas

F

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Missile injuries from power lawn mowers

Thomas B. Coopwood, MD

Every year, many people sustain injuries resulting from the use of power lawn mowers. The most common ones are associated with the extremities, including lacerations and amputations of digits. Less common are those occurring when foreign bodies are hurled at the operator or bystander.

The Consumer Safety Commission estimates that in 1970 there were 140,000 injuries, 5% of which were due to embedded foreign bodies.[1] Reports on these injuries have appeared sporadically. Barskey reported in 1960 five cases of eye injuries due to thrown objects.[2] In 1966, the *Journal of the American Medical Association* reported that in one accident, an iron bolt was thrown into a pregnant woman's abdomen. A cesarean section was required, but the mother and child did well.[3] In 1969, Knapp pointed out that more attention should be given to "thrown objects" injuries because he felt that these were more frequent than had been reported.[4] The reason that severe injuries occur from thrown objects was discussed in a 1973 news article, which stated, "A 26-inch long rotary power mower blade, weighing 3.5 pounds, rotates at 3,000 rpm (and even faster if the motor is run at full power). It can be calculated to have a kinetic energy of 2,100 foot pounds, or the equivalent energy stored in a 21-pound weight dropped 100 feet. This is three times the muzzle energy of a .357 Magnum pistol, which can fire a bullet through the engine block of an automobile."[1]

During the past few years, I have seen three patients who were injured by wire missiles launched by rotary lawn mowers. There is little in the literature on this subject, and these injuries are potentially lethal.

Case Reports

Case 1: A 13-year-old Latin American boy was operating a rotary power lawn mower when something hit him in the left lower part of the abdomen, causing a puncture wound. He was brought to the emergency room immediately. He was hypotensive on arrival but responded quickly to fluid replacement. Physical examination showed a wound in the left lower quadrant of the abdomen with tenderness and decreased bowel sounds, but peripheral pulses were present. Roentgenograms of the abdomen showed a piece of wire in the left lower quadrant. Exploratory surgery revealed multiple small bowel perforations and a large hematoma in the left lower retroperitoneal space. The aorta was isolated, and clamped until the left iliac artery could be isolated, and then it was clamped. A through-and-through injury to the left external iliac artery was found. This section of artery was resected and a primary anastomosis done. The small bowel perforations were closed. Postoperatively the patient did well and was last seen two months after surgery, at which time his left femoral pulse was strong.

Case 2: A 21-year-old black man was mowing a lawn with a rotary power mower when a piece of wire flew up and stuck in his abdomen. He immediately pulled it out and his employer brought him to the hospital. The wire was about 15 cm (6 inches) long and the patient felt that it had penetrated only 2.5 cm (1 inch) or so. Although he had no signs or symptoms of penetration, he was admitted for observation.

Physical examination showed only a puncture wound in the right upper quadrant of the abdomen, 2.5 cm below the costal margin in the nipple line. The patient was observed overnight, and the next

morning he complained of abdominal pain and was extremely tender in the right upper quadrant of the abdomen. At laparotomy, bile was found in the abdominal cavity as a result of a puncture wound of the gallbladder. A cholecystectomy was done, and the patient had a benign course with complete recovery.

Case 3: A 10-year-old white boy was helping his friend mow a lawn with a rotary mower when something hit him in the right side of the neck. He had some pain and minimal bleeding, and was brought to the emergency room some 30 minutes after the injury. Physical examination showed a large hematoma and a 1.5 cm laceration in the right side of the neck at the angle of the jaw. Results of a neurological examination were normal. Roentgenograms showed a piece of wire 1.3 cm (0.5 inches) in length in the upper right side of the neck. Because of its location, and because of the hematoma, exploration of the neck was advised. A carotid-type incision was made and the common, internal, and external carotid arteries were isolated. The foreign body was seen in the internal carotid artery. As it was removed, arterial blood flow followed. This was controlled with digital pressure and a vascular clamp placed on the common carotid artery. A stitch of 4-0 prolene was used to close the hole. The clamp was in place less than three minutes. Postoperatively, the patient did well and had no neurological deficit. I last saw him three years after surgery, at which time he was well.

Discussion

Injuries from missiles hurled by rotary lawn mowers should not be taken lightly. Indications for surgical exploration should be the same as those for exploration of a gunshot wound. In case 1, exploratory surgery was indicated because of unquestionable peritoneal penetration and hypotension. Although there was no pulse deficit in the left femoral area, a through-and-through laceration of the external iliac artery was found, once again pointing out that there can be major vascular injury despite full distal pulse. In case 2, an exploratory operation was not done immediately because of the misleading history and because no positive physical findings indicated perforation of an intra-abdominal organ. When the physical findings changed, exploratory surgery was performed and a gallbladder injury was found. Despite the contamination of the upper abdomen with bile, no complications ensued. In case 3, the indication for exploratory surgery was the presence of a large hematoma in the neck and roentgenographic evidence compatible with a major vascular injury.

Summary

Three cases of significant injuries resulting from missiles hurled by rotary mowers are reported. The surgical significance of these injuries is discussed, emphasizing that they should be handled with the same caution and urgency as one would use in managing a gunshot wound of the same area.

References

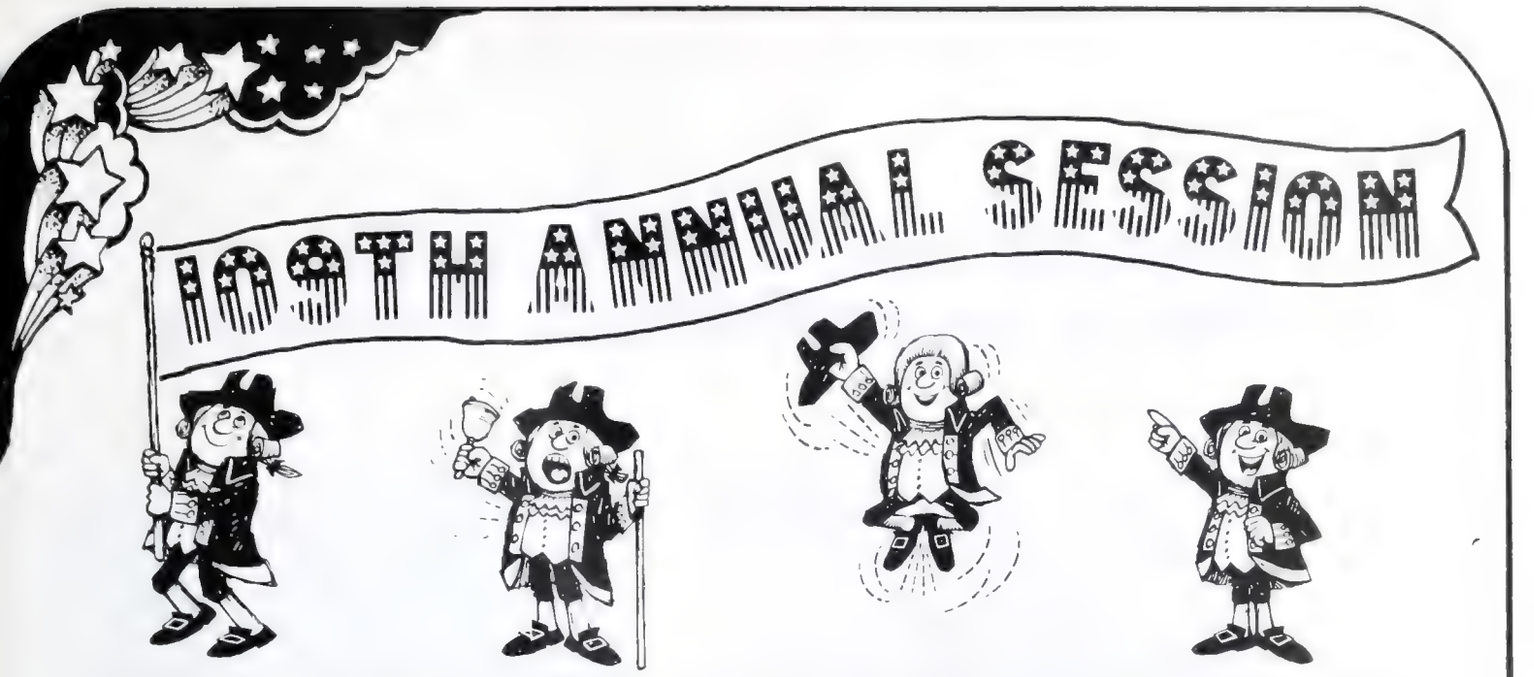
1. News: A summer warning: lawn mowers can maim. JAMA 225:355, 1973.

2. Barskey D: Eye injuries due to power lawn mowers. AMA Arch Ophthol 64:385-387, 1960.

3. News: Personal injuries caused by mowers. JAMA 196:37, 1966.

4. Knapp LW Jr, McConnell WH, Top FH: Power mower injuries. J Iowa Med Soc 59:500-501, 1969.

Dr. Coopwood, 2 Medical Arts Square, Austin, Texas 78705.



TEXAS MEDICAL ASSOCIATION

Dallas, May 6-9, 1976

STILL NUMBER ONE.

Leading Causes of Death
United States: 1972 Estimates

Diseases of Heart and Blood Vessels 1,062,160

All Other Causes Combined 910,843

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Physical loss in adolescence and its implications for psychiatry

George B. Tipton, MD

A great deal has been written about physical loss in children and the attendant emotional impact on the family. Much less is to be found on emotional or physical loss in adolescents due to accident, illness, or abuse of toxic substances or drugs.

If the adolescent responded to loss of function with the depressive features seen in adults, it would not be difficult to describe the clinical picture. The classical features of adult depression would be expected—depressed mood, mental and psychomotor retardation, insomnia, loss of appetite, somatic complaints, and a pessimistic view of the future. In the adult, a personal loss of some sort would also be expected.

This is not the case in adolescents.

Depression secondary to loss is only one explanation for depression in an adolescent. The lack of ability to compete effectively in areas of social skills and academic performance may bring on depression. Inability to handle sexual and aggressive drives causes depression. Loss of legitimate dependency status, lack of vocational identity, loss of idealism, and inability to become genuinely intimate with others may be other sources of depression.

The adolescent seems so concerned with acceptance in his peer group that any physical or mental dysfunction that makes him different is a catastrophe. This loss may be minor and noted only by the adolescent, or it may be a major loss leading to rejection by his peer group. Referral to a professional for physical or emotional symptoms may lead to additional feelings of being weak, dependent, or defective.

Often, the young adolescent with physical or emotional loss is depressed secondary to the loss of function or change in appearance of his body. Such a youngster also feels unacceptable, bad, or evil because he is different from his peers. Toolan said that such feelings lead the adolescent into antisocial behavior, which in turn only further reinforces his belief that he is no good. The youngster then feels inferior, bad, or ugly compared to other kids his age.

Adolescent boys, even in early adolescence, find it difficult to admit to any evidence of weakness. The emotional or physical loss and the associated depression are denied. Sullenness, enuresis, eating disturbances, and delinquency may be the only behavior easily observed. Girls in early adolescence may become sexually promiscuous in an attempt to avoid feeling lonely, sad, and helpless; promiscuity also may be a self-destructive way of devaluing themselves and others, or it may be a symbolic cry for help.

The clinical picture of an adolescent suffering from some loss of neuronal function or organic brain syndrome plus depression can be quite confusing. Roy Grinker wrote of "masked depression" as early as 1961. He described "smiling depressions," hypochondriacal preoccupations, and dissociated states. These patients deny any sadness, and may complain only of fatigue, insomnia, stomach pain, or headaches. This masking of depressive symptoms is seen in most depressed adolescents.

Before attempting to describe the combination of neuronal loss and depression in adolescents, I will describe organic brain syndrome as it is seen in adolescents and in adults. Clinically, a patient with organic brain syndrome shows problems associated with impaired brain function. Organic brain syndromes are manifested according to the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* by: (1) impair-

ment of orientation, (2) impairment of memory, (3) impairment of intellectual functioning, (4) impairment of judgment, and (5) lability and shallowness of affect. Associated with these symptoms, one may see clouding of consciousness, confusion, irritability, defensiveness, inappropriate humor, sudden rages, and irresponsible behavior. Changes in motor behavior can include restlessness, clumsiness, changes in rhythm of speech, and a decreased tolerance to alcohol.

The fundamental process in any organic brain syndrome is the change of function of neurons. This may be caused by a toxic reaction, an infectious agent, a metabolic disorder, a neurologic disease, physical trauma, or any medical disorder that damages metabolism or structure of neurons. When damage to neurons is widespread and diffuse, the symptoms of the disorder are the same regardless of the cause. However, the form in which these symptoms—disordered judgment, orientation, memory, intellect, and affect—are expressed behaviorally depends on the individual patient.

How someone responds to a loss of brain function depends on his usual coping styles, his past experiences with adversity, and the setting in which the loss was experienced. The rate at which the disorder progresses and how the change in functioning is handled by others affects the patient's behavior. Some patients minimize their loss of function by withdrawal, denial, and evasion. Some present to friends and family an unusual facade of cooperativeness and humor. Patients who feel insecure and find no support from those around them may respond with gross anxiety and panic. Irritability and rage reactions may be seen in those patients who are put in situations that reveal their loss of ability to function mentally as they had in the past.

Patients who have become depressed in the past by adversity may again become depressed when faced with loss of brain function. Suicide may be a real danger. In fact, a significant relationship between physical illness and suicide has been reported. Of some 742 deaths by suicide, 43% of the victims were suffering from a physical illness. In others, aggressive and sexual urges may be acted out to a greater degree in a manner similar to behavior noted before the onset of the organic brain syndrome. If the patient has been able to confide in family and friends in the past, he may once again be able to alleviate much anxiety and guilt by discussing his problems with others. Since the patient will be making efforts to avoid anxiety and depression by his usual defensive maneuvers, this complex group of symptoms makes it difficult to know which symptoms are due to the loss of brain function and which are due to an attendant depression or to anxiety. There is little likelihood that an adolescent patient will simply present classic adult depressive symptoms added to the symptoms seen in an organic brain syndrome.

To complicate the problem even more, depressive symptoms vary with the stage through which the adolescent is passing. In early adolescence, one might see crying spells, fears of death, irritability, insomnia, loss of appetite, loss of energy, poor school adjustment, or school phobia. Behavioral changes like temper outbursts with behavior destructive to self, others, or property may occur. The onset of disobedience and accident-proneness may be secondary to depression rather than to the impulsivity resulting from a recently acquired organic brain syndrome.

On the Adolescent Unit of the Austin State Hospital, steps have been formulated in an attempt to distinguish the symptoms of a recent organic brain syndrome from the symptoms of attendant depression. The first step is to decide whether or not an organic brain syndrome is present. Second, a decision is made as to whether medical or surgical treatment of the condition is indicated. Third, a consideration is given as to what portion of the symptoms are organic and not directly amenable to any therapeutic effort, and what portion are symptoms of depression.

The investigation may begin with a medical workup that includes a history of the disordered behavior and comparison of the adolescent's current and previous behavior. A physical examination, neurologic examination, electroencephalogram, skull x-rays, brain scan, and psychometric testing are also obtained. Psychometric testing is done in an attempt to reveal focal and/or general neuronal dysfunction and/or attendant emotional problems. Let us assume that a diffuse neuronal loss, rather than a medically treatable or focal disorder, is detected. An underlying depression is suspected in the adolescent because of irritability, lack of motivation, and inconsistent behavior, only because these same observable symptoms can be secondary to neuronal dysfunction as well.

The next step is to arrange testing by the Occupational Therapy Department. This department does not function to fill patients' time, but provides evaluative services and schedules ward programs that enable the adolescents to gain certain competencies. In the occupational therapy evaluation the patient is given a battery of tests known as the revised Goodman battery. This gives the examiner an idea of function and its relationship to structure and directions. Fine motor skills, size and shape perception, abstract thinking ability, and attitudes toward task completion are evaluated. The patient's anxiety level and its relationship to directions and structure are noted.

A recommendation after this battery of tests might include a suggestion that his anxiety level or disorganization is such that further medical or psychiatric treatment is indicated. A recommendation might be that the patient be placed in a highly structured, supervised program in which he could achieve basic work skills. A recommendation might be that the patient is not in need of basic work skills or a structured program of classes; he might be directly referred to school or to a job situation.

At any rate, the adolescent is assigned tasks which the staff believes to be appropriate to his level of competency. This means that the patient's success at the tasks is fairly well assured. Pressure from the staff through social reinforcement, a formal merit system, and the staff's attitude usually is sufficient to bring forth the patient's best efforts. Acting out behavior, either aggressive or sexually promiscuous, is not allowed. These behaviors are often seen on admission, but sufficient staff is available to control them. Staff cooperation is excellent. The staff is oriented as to why certain rules or regulations exist, and has a voice in changes in unit structure.

In some cases, the adolescent with organic brain impairment will begin showing classic signs of depression when his or her acting out, defensive behavior is curtailed. In these cases, suicidal threats and attempts, insomnia, anorexia, slowed psychomotor activity, and a saddened af-

fect may be seen. Once these classic signs of depression appear, a consideration of individual and/or group psychotherapy is made. In the more severe cases a trial of antidepressant medication might be added. Admittedly, the medication has little effect unless the adolescent comes to grips with his physical or emotional loss in psychotherapy.

In many more cases, depressive symptoms are never seen. Instead, acting out behavior decreases as competence increases. Initial expectations are not set beyond the competence of the adolescent. Observation of daily behavior, evaluation, and various neurologic tests give an idea of what level of capability the adolescent can handle. Daily observation continues, however, for often the patient will evidence surprising competence beyond that indicated on initial evaluation.

This phenomenon, whereby the adolescent surpasses initial expectations, seems to be the result of improvement in the depression. Many other factors could be involved. As the adolescent achieves reasonable successes, his self-esteem and self-confidence increase. His ability to deal socially with his peers increases. Positive social reinforcement by staff and peers for increasing competence is noted. He becomes less dependent on staff approval and seems able to appreciate the quality of his work and of his relationships with his peers.

This is the working method by which it is decided how much permanent, diffuse neuronal loss is present and how much of the clinical picture is functional depression. Except for this method by which the adolescent is taken step by step to increasing competency, there has been an inability to differentiate between the symptoms of the two conditions. Although the causes of the symptoms are different, the end result is similar.

One group of adolescents is difficult to handle by this method. These youngsters are admitted after they have used enough of some substances, usually glue or gasoline, to cause moderate diffuse neuronal loss. The histories from family members usually lead us to suspect that the patient's use of toxic material was the self-destructive behavior seen in adolescent depression. As the organic brain syndrome progresses, depressive features increase as well. When the patients are seen, they are using glue or gasoline to alleviate intolerable depressive feelings and self-knowledge regarding their lack of function.

A cycle seems to develop in which the youngster becomes more brain damaged, becomes more depressed, uses more toxin to "get high" and away from the depression, and then sustains more brain damage. Successes in persuading these adolescents to break the cycle are infrequent.

Summary

Depression and organic brain syndrome in adolescence are described, and a method of differentiating between the two conditions is presented. Although no specific treatment is available for most cases of chronic organic brain syndrome, treatment is used to help in differentiating one condition from the other. The improved functioning seen in the adolescents described is felt to be associated with alleviation of depressive symptoms as well as with repair of neuronal tissue that still can function adequately.

In the past 12 months, 20 of the 400 patients admitted to the Adolescent Unit were diagnosed as suffering from organic

brain syndrome with attendant depression. All but two of these patients were dismissed to outpatient care after improvement in function was sufficient to make further hospitalization unnecessary. However, no follow-up studies are available to use in predicting the eventual outcome for these youngsters. Just what level of functioning is seen in one year, five years, or later life is unknown.

Further study of these patients would be helpful in evaluating the results of treatment regimens, and long-term follow-up might help us in predicting what is likely to happen to persons in whom diffuse organic brain damage begins in adolescence.

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Use of gray scale ultrasonography in diagnosing abdominal disorders

Stanley B. Novy, MD; Mark A. Fleming, MD

Ultrasonics has only recently been used for diagnosis; it is a growing, dynamic field that has many applications in medicine. Ultrasound initially was used for detection and communication devices (sonar) after World War I; industry later employed ultrasound for the detection of flaws in metal. During World War II, with the development of advanced electronic circuitry and sonar technology, ultrasonic instrument performance greatly improved. However, it has only been within the past few years that equipment advances have made possible routine ultrasonographic scanning of the abdomen.[4]

The instrument transmits a short burst of high-frequency sound waves into the patient through a transducer. The time required for a pulse to travel to an interface, reflect, and return can be used to measure depth or range, as in radar.

Different modalities are used in ultrasonography. A-mode (amplitude) is shown on an oscilloscope screen in the form of echo amplitude plotted versus depth of focus. It is used to determine the midline position in the skull, to localize foreign bodies in the eye, and—in conjunction with M-mode (motion)—to locate heart valves and to help in determining whether a mass is cystic or solid.

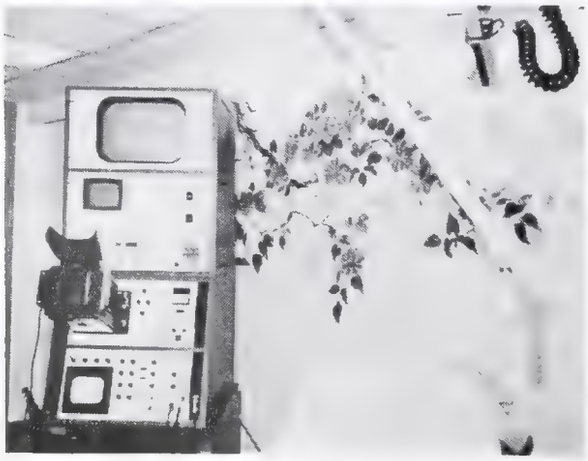
M-mode uses a depth-versus-time type of display to record and measure heart valve motion and velocities. B-mode (brightness) permits scanning of the abdomen to produce cross-sectional images. In addition, gray scale scanning may now be performed; this produces images in ten shades of gray instead of the black and white which was seen in earlier conventional B-scanning.

At St. Joseph Hospital, a Unirad Scanner has been in operation since December 1974 (Fig 1). The scanner can perform echoencephalograms and echocardiograms. The machine has a gray scale scanner—one of the first to be used in Texas—and has provided a new dimension in abdominal scans.

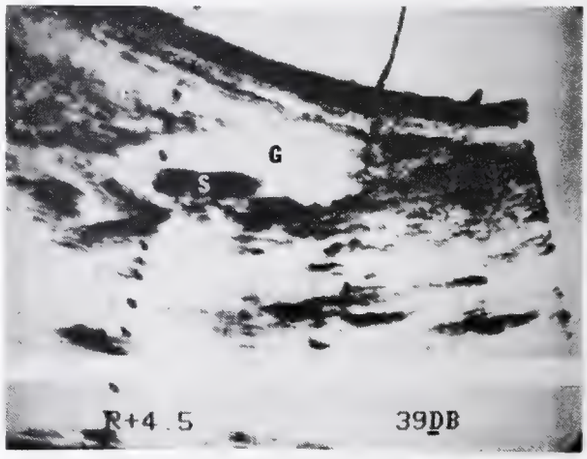
At St. Joseph Hospital, gray scale scans have been helpful in defining abnormalities throughout the abdomen.

In the upper abdomen, ultrasonography has been helpful in diagnosing abnormalities of the biliary system;[9] a dilated gallbladder or dilated common duct can be

1. Unirad ultrasound scanner.



2. Gallbladder with single stone, longitudinal scan. G: gallbladder, S: stone, L: liver



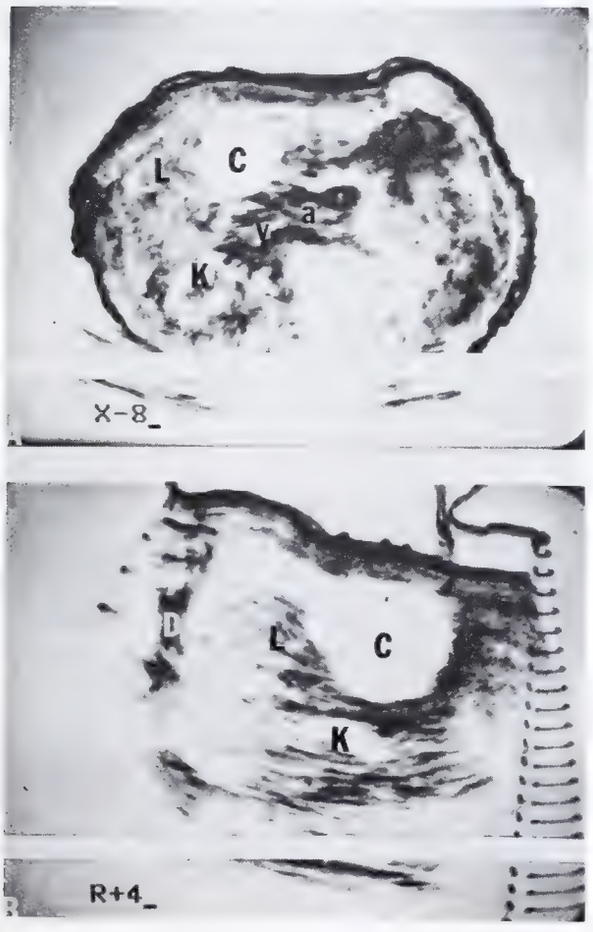
identified (Fig 2), and abnormalities within the liver can be defined (Fig 3).[10] With ultrasonograms it is possible to identify and characterize masses as to their nature, solid or cystic. Solid masses have internal echoes at high gain settings, while cystic structures remain echo free and have sharp borders.

In the pancreas, ultrasonography is the examination of choice for evaluation of pancreatic pseudocyst (Fig 4).[7] Also, mass identification may help in evaluation of carcinoma of the pancreas and pancreatitis. Abdominal aortic aneurysms are easily identified (Fig 5).[6] The exact size of the aneurysms may be determined, as well as the presence of arteriosclerotic plaque or clot formation. Lymph node enlargement as is seen in Hodgkin's disease or lymphosarcoma may be suggested by gray scale ultrasonograms (Fig 6).[1]

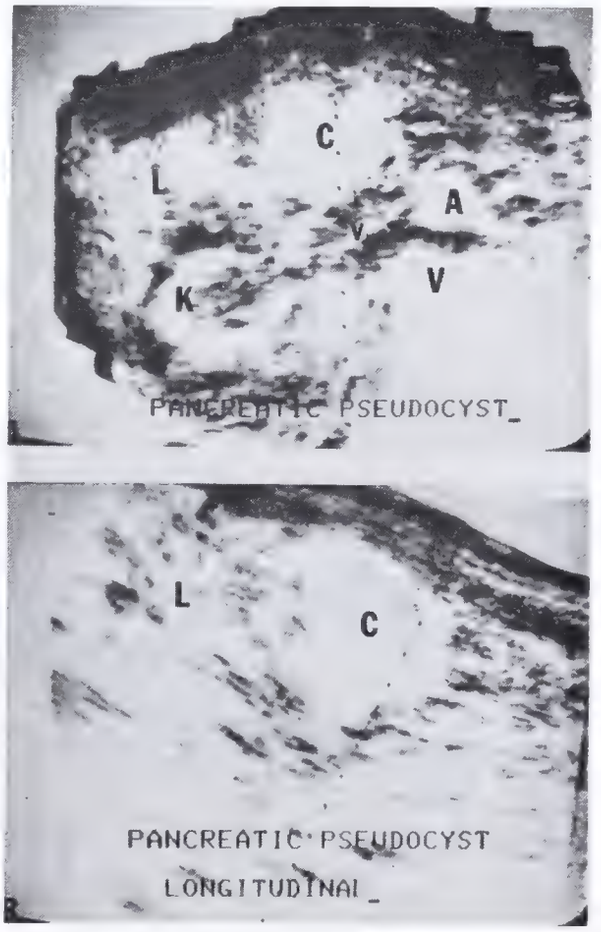
Once an intravenous pyelogram suggests a mass in the kidney, ultrasonic scanning is of diagnostic importance in determining whether or not the mass is cystic or solid by the criteria previously described (Figs 7, 8).[3] Ultrasonography provides a diagnosis or suggests further studies to be done.

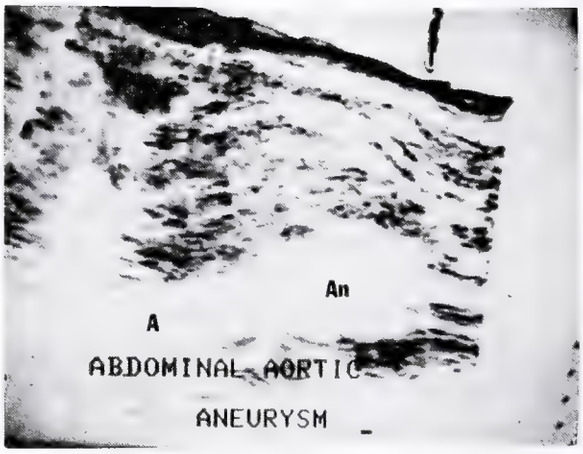
Perhaps the area of diagnosis in which

3. a. Liver cyst, transverse scan. C: cyst, L: liver, K: kidney, a: aorta, v: vena cava
b. Longitudinal scan. C: cyst, L: liver, K: kidney, D: diaphragm



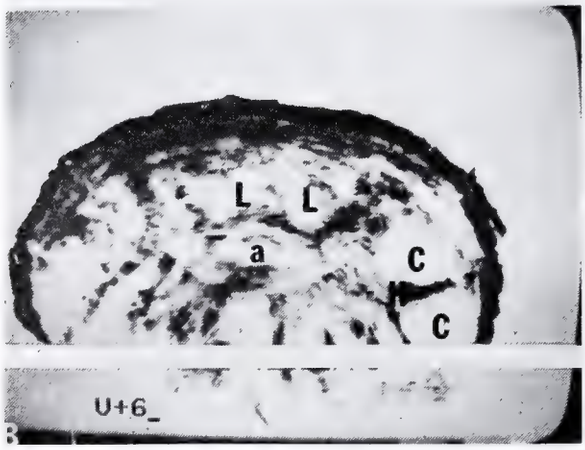
4. a. Pancreatic pseudocyst, transverse scan. C: cyst, L: liver, K: kidney, v: vena cava, A: aorta, V: vertebra
b. Longitudinal scan. C: cyst, L: liver





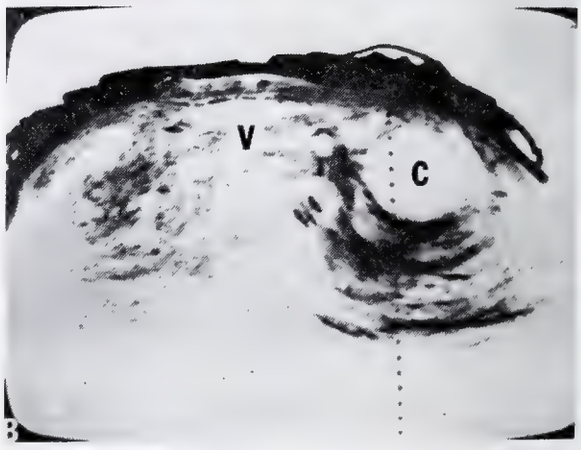
5. Aortic aneurysm, longitudinal scan. A: aorta, An: aneurysm, U: umbilicus

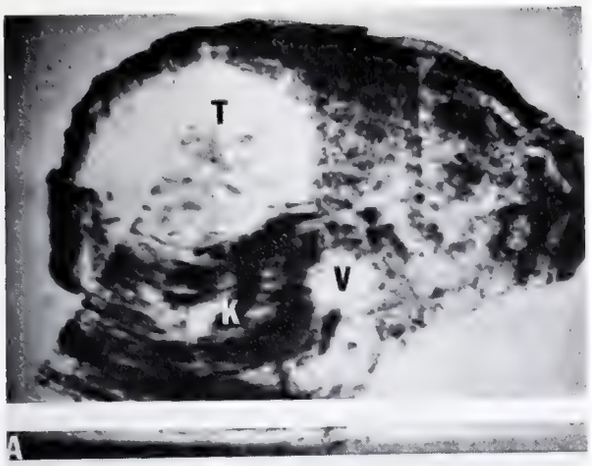
6. a. Lymphosarcoma, transverse scan. a: aorta, C: colon with water, H: haustra, L: lymph nodes
b. transverse scan. a: aorta, C: colon, L: lymph nodes, H: haustra



ultrasonography has shown the greatest impact is in the female pelvis. A full bladder allows the ultrasound beam to be transmitted through a fluid medium, so that the anatomy of the pelvis can be visualized without interference of the bowel. Gas-filled structures totally reflect the sound waves and will obscure structures beneath them. In obstetrics, ultrasonography is the method of choice for evaluating the fetus for gestational age (Fig 9). An accurate measurement of the fetal head is either recorded on the oscilloscope, using A-mode and gray scale, or read directly from the biparietal scope available on our machine. Us-

7. a. Renal cyst, longitudinal scan. C: cyst, K: kidney
b. Transverse scan. C: cyst, V: vertebra

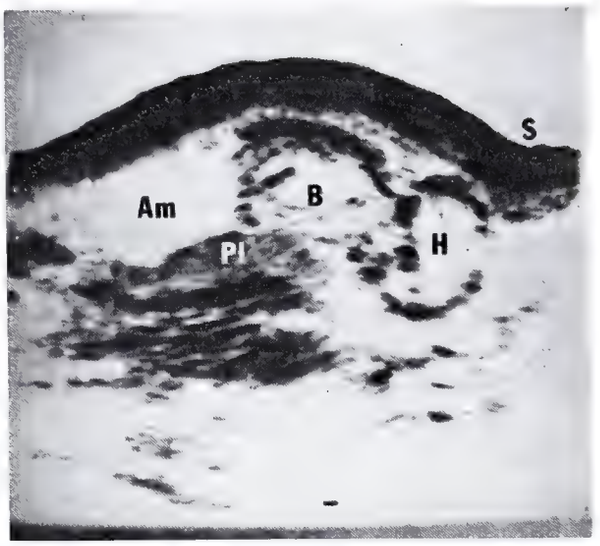




8. a. Wilms' tumor, transverse scan, supine. T: tumor, K: kidney, V: vertebra
b. Transverse scan, prone. T: tumor, K: kidney, V: vertebra

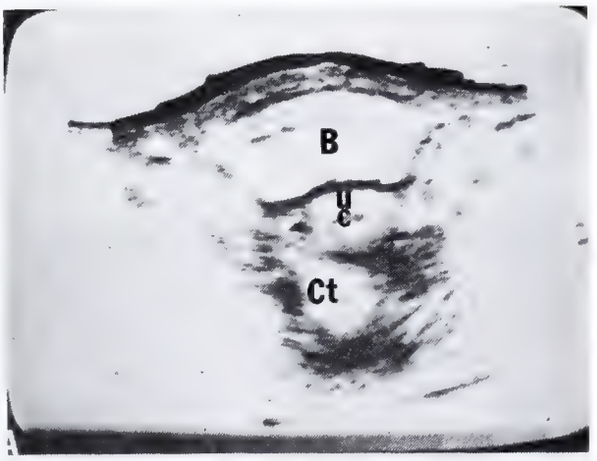
9. Biparietal diameter, fetal skull. S: skull, F: falx, C: centimeter marker.

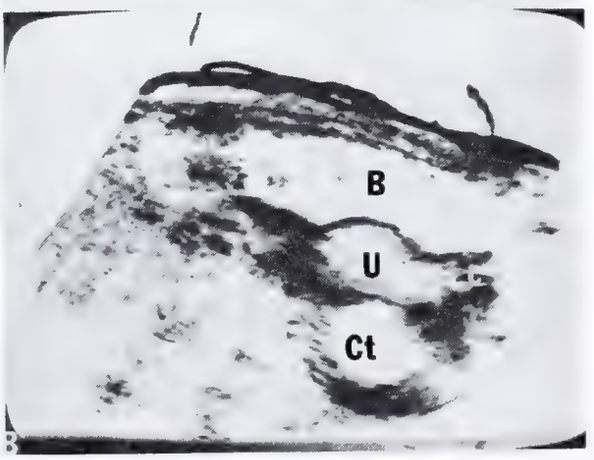
10. Placenta. A: amniotic fluid, C: chorionic plate, P: placenta



11. Fetus in vertex presentation. Am: amniotic fluid, Pl: placenta, B: body, H: head, S: symphysis

12. a. Ovarian cyst, transverse scan. B: bladder, u: uterus, c: cervix, Ct: cyst
b. Longitudinal scan. B: bladder, U: uterus, c: cervix, Ct: cyst





ing tables, the biparietal diameter is converted to gestational age. Placental localization (Fig 10) and fetal position (Fig 11) also are determined easily and certain fetal abnormalities such as anencephaly or hydrocephalus may be detected by ultrasonography. These studies are performed without ionizing radiation and its dangers to the fetus. No adverse effects or genetic changes in the human have been found to result from diagnostic use of ultrasonics.

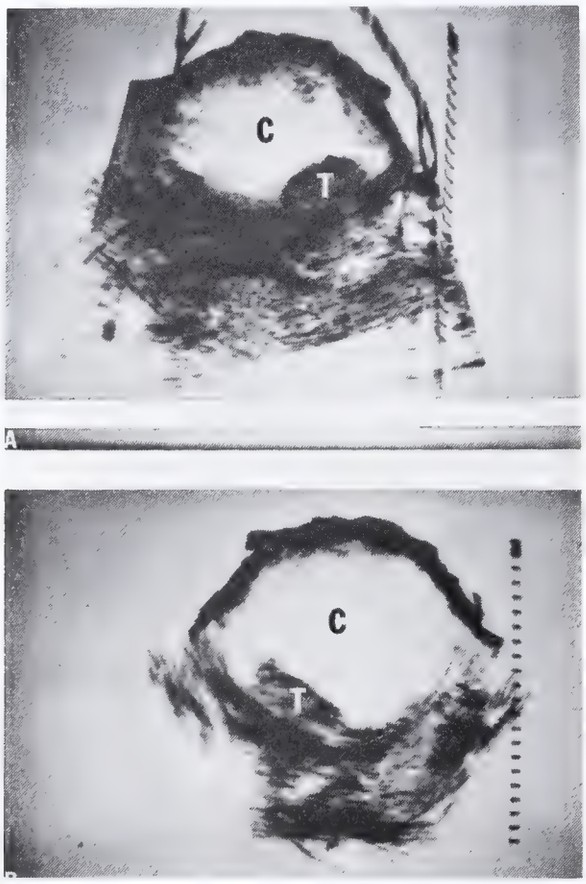
In gynecology, ultrasonography is helpful in diagnosing abnormalities within the pelvis.[2] It is helpful in evaluating masses as to size and shape, and whether or not they are cystic or solid (Figs 12,13). Uterine and ovarian tumors can be identified.[8] Frequently, an IUD within the uterus can be localized (Fig 14).

At St. Joseph Hospital, ultrasonic scanning is being employed to aid in diagnosis. Gray scale ultrasonograms have been particularly helpful in the evaluation of abdominal disorders.

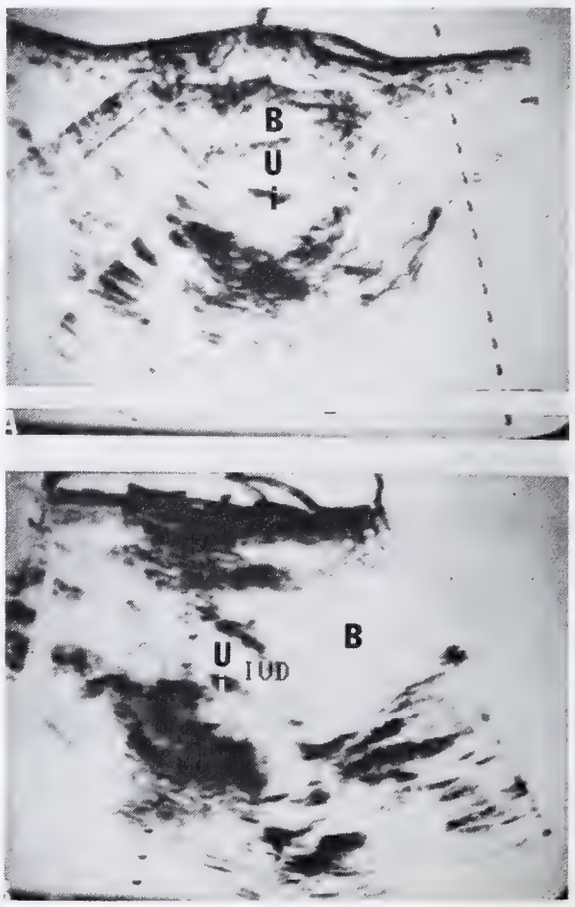
Acknowledgment

Candy Hess, RT, assisted in the preparation of this article.

13. a. Ovarian cystadenocarcinoma, longitudinal scan. C: cystic component, T: tumor within cyst
b. Transverse scan. C: cystic component, T: tumor within cyst



14. a. IUD within uterus, transverse scan. B: bladder, U: uterus, i: IUD
b. Longitudinal scan. B: bladder, U: uterus, i: IUD



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Drs. Novy and Fleming, Department of Radiology, St. Joseph Hospital, 1919 LaBranch, Houston, Texas 77002.

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Phycomycosis in a renal transplant recipient

S. B. Thorsteinsson, MD; D. M. Musher, MD; L. R. Ortiz, MD;
K. S. Wolfe, MD; E. J. Weinman, MD; F. X. Schloeder, MD

Successfully treated phycomycosis caused by *Rhizopus* and involving the hard palate and paranasal sinuses in a renal transplant recipient is reported. Therapy consisted of local excision, intravenous administration of amphotericin B, and discontinuation of immunosuppressive agents. Almost no renal toxicity was observed during the amphotericin B therapy, perhaps because mannitol was administered concomitantly.

Introduction

Patients who undergo renal transplantation have increased susceptibility to infection probably due, in large part, to immunosuppressive therapy.[1] However, phycomycosis, often referred to as mucormycosis,[2] has rarely been encountered in such patients.[3,4] In this report we described the diagnosis and course of treatment in a patient in whom infection of the paranasal sinuses and hard palate, caused by *Rhizopus*, developed following renal transplantation.

Case Report

This 48-year-old man was hospitalized at the Veterans Administration Hospital, Houston, in January 1973 for end-stage hypertensive renal disease. Hemodialysis was begun and continued until March 1974 when the patient received a kidney transplant from a nonidentical sibling. Treatment with azathioprine and methylprednisolone was instituted. An episode of acute rejection on the tenth day responded to local irradiation of the kidney and increased doses of corticosteroids. Two weeks after surgery the second right upper molar was extracted and a periodontal abscess was drained. From the time of surgery until the patient's discharge, fasting hyperglycemia (blood glucose > 200 mg/100 ml) was repeatedly documented; acidosis was not found and no therapy was instituted. There was no personal or family history of diabetes. The patient was discharged on a regimen of prednisone, 50 mg/day, and azathioprine, 200 mg/day.

Two months later, low-grade fever developed, and the patient had a sore throat, pain in the right upper jaw, and numbness in the right infraorbital area. During the next few days these symptoms progressed and were accompanied by severe frontal headache and bloody discharge from the right nostril.

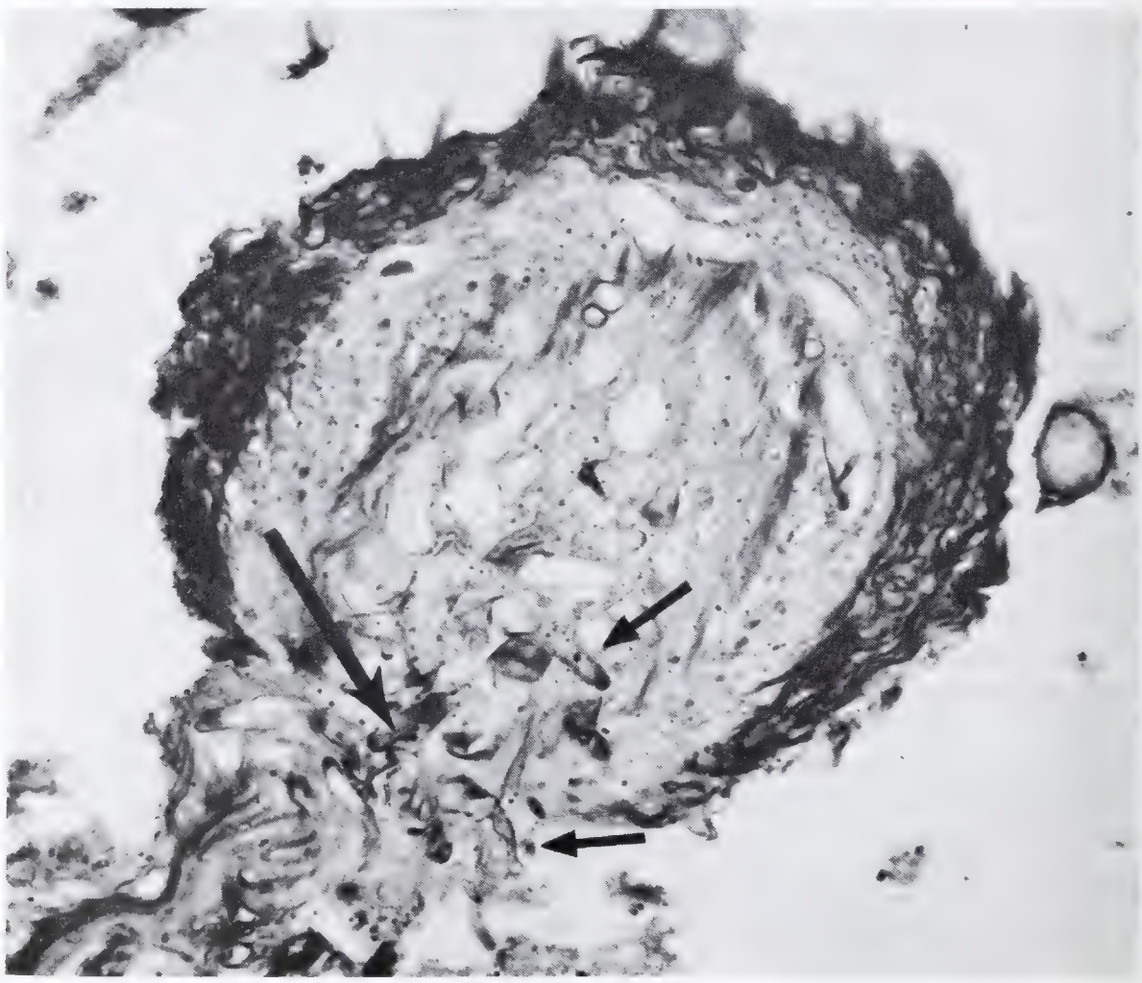
The patient was readmitted to the VA Hospital in June 1974; he appeared to be acutely and chronically ill. His blood pressure was 120/95 mm Hg, pulse rate 110/minute, and temperature 38.2 C (100.8 F). Mild swelling and decreased sensation were present in the right infraorbital area. There was tenderness over the right maxillary sinus. Dark blood could be seen in the right nostril. The gingiva around the extraction site was mildly inflamed but no evidence of an abscess could be found. The eyegrounds had not changed since the previous admission, and there was no tenderness over the transplanted kidney. Laboratory studies disclosed the following values: hematocrit reading, 40%; white blood cell count, 7,700/cu mm; blood urea nitrogen, 22 mg/100 ml; creatinine, 1.6 mg/100 ml; sodium, 131 mEq/liter; potassium, 47 mEq/liter; chlorides, 96 mEq/liter; bicarbonate, 22 mEq/liter; blood glucose, 403 mg/100 ml. Acetone (2+) was found in the urine on admission but was not found

From the Department of Medicine (Divisions of Infectious Diseases and Nephrology) and the Department of Surgery (Division of Otolaryngology), Baylor College of Medicine, and the Veterans Administration Hospital, Houston.

subsequently. Serum bicarbonate and chloride concentrations were repeatedly normal. Roentgenograms showed opacification of the right maxillary sinus.

The diagnosis of acute sinusitis was made. Treatment with penicillin produced no clinical response. Four days after admission a black necrotic mass was removed from the right nostril and the maxillary sinus was irrigated; purulent material was recovered which grew *Staphylococcus aureus* resistant to penicillin. Methicillin was administered and the patient improved. Histologic examination of the necrotic mass revealed broad, nonseptate, fungal hyphae typical of the phycomycetes (Fig 1) and cultures grew *Rhizopus*. The diagnosis of invasive phycomycosis was made. Extensive surgical excision was performed, consisting of infranasal and transnasal ethmoidectomy, total debridement of the maxillary sinus, and excision of the medial wall of the maxillary sinus. At the time of surgery both the ethmoid and the sphenoid sinuses were obviously involved, but the cribriform plate was thought to be intact. Histologic examination and cultures confirmed the diagnosis of invasive phycomycosis. Amphotericin B was instilled locally immediately after surgery, and the

1. Biopsy from the nasal mass (turbinate) showing invasion of an artery by broad nonseptate fungal hyphae (arrows). Silver methenamine stain. (X 590, approximately.)

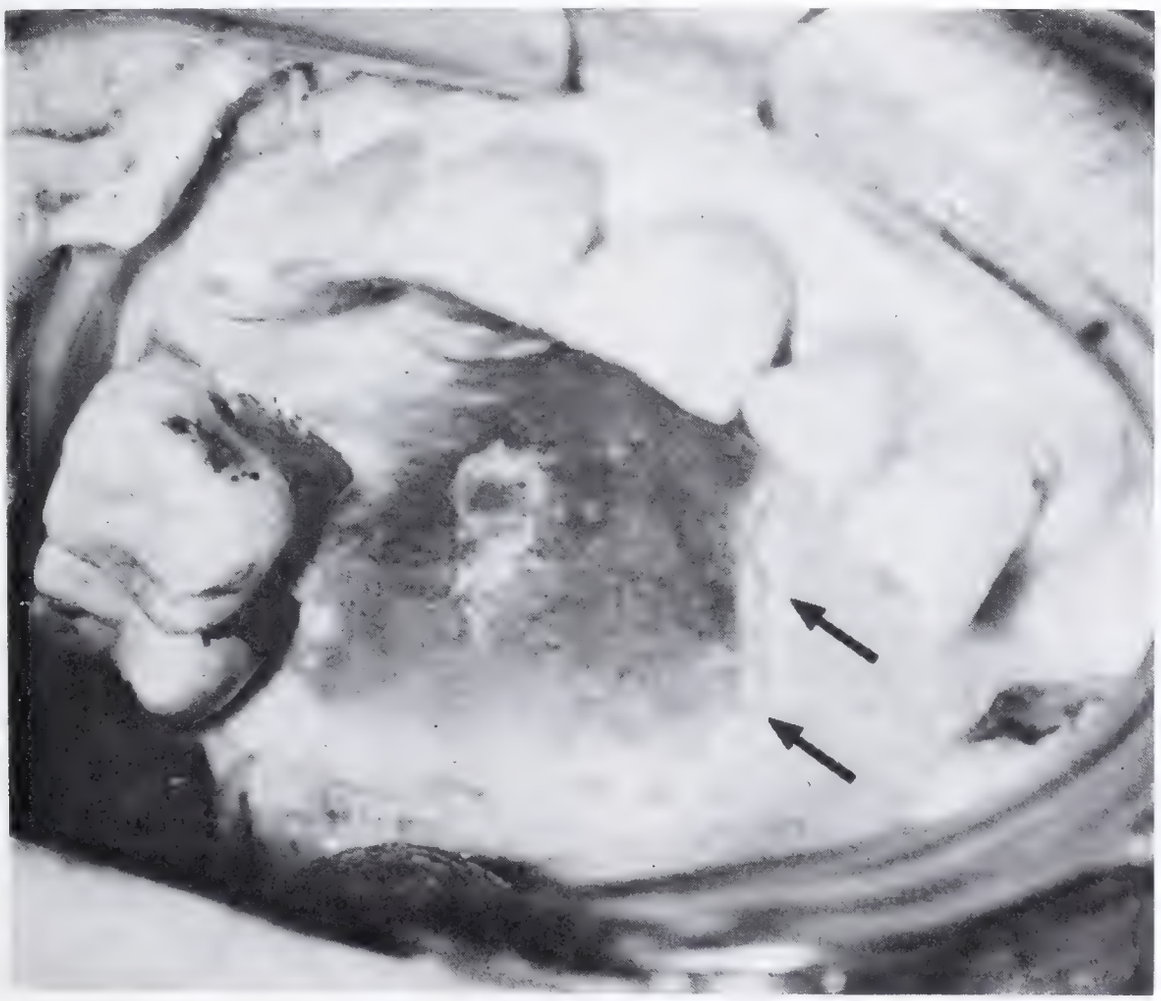


sinus cavity was irrigated with amphotericin B solution twice daily.[5] Two days later the right half of the hard palate became necrotic. The area was sharply demarcated (Fig 2) and appeared to correspond to that supplied by the palatine artery. Histologic examination of the palate showed heavy involvement by phycomycetes, and the necrosis was thought to have resulted from extension of the infection into the palatine artery.

Azathioprine was discontinued and the prednisone dosage was rapidly reduced to 12.5 mg/day. Intravenous administration of amphotericin B was started and within four days the dosage was gradually increased to 50 mg/day. In order to minimize nephrotoxicity,[6] mannitol, 12.5 gm, was given before, during, and after each dose of amphotericin B. Creatinine clearance did not decrease and, except for the loss of ability to acidify the urine, no abnormalities in renal function were noted. Creatinine clearance remained around 60 ml/minute and the serum creatinine value was stable at 1.5 mg/100 ml.

With this treatment there was no further spread of the infection, although tissue

2. Five days after extensive surgery, the right half of the hard palate is necrotic, extending from midline to the gingiva laterally. Sites of initial dental extraction and punch biopsy obtained two days previously are noted. Arrows point to the midline.



that was already necrotic broke down leaving a large defect in the roof of the mouth. The patient's general condition gradually improved. Treatment with 50 mg of amphotericin B daily was continued for nine weeks (total dose, 3 gm). During the next ten weeks an additional 50 mg of amphotericin B was administered each week, bringing the total dose to 3.5 gm. During this time the patient was fitted for a prosthesis to reclose the hard palate. He has been observed closely for six additional months, has been on a regimen of prednisone, 12.5 mg daily, and has no clinical evidence of recurrence of infection or deterioration of renal function.

Discussion

Phycomycetes are fungi that are found widely in nature. Although rarely a cause of diseases in humans with intact host defense mechanisms, they are capable of causing fulminant and frequently fatal infections in susceptible hosts.[7] Diabetes, with [8-10] or without [11-13] acidosis, is the most frequent underlying cause. Immunosuppressive therapy has also been implicated.[14] Our patient had hyperglycemia and was receiving prednisone and azathioprine. Which of these contributed to his susceptibility to this infection cannot be determined. These circumstances are similar to those in another reported case of phycomycosis in a renal transplant patient in which hyperglycemia was also present.[3]

The portal of entry in cases of rhinocerebral phycomycosis is thought to be the mouth, nasal mucosa, or the paranasal sinuses.[9,15] It is likely that *Rhizopus* gained access to our patient's maxillary sinus when a tooth was removed, a mechanism which has been described previously[16] and which should be considered in the management of susceptible patients who require dental extractions. If an extraction is to be undertaken, it might also be prudent to reduce the dosage of immunosuppressive drugs and to treat steroid-induced hyperglycemia in order to minimize the likelihood of phycomycosis.

Because the causative organisms are ubiquitous, the diagnosis of phycomycosis cannot be made by culture alone. However, the histological finding of invasion of tissue by characteristic broad nonseptate hyphae is conclusive.[5,11] The well-known propensity of the phycomycetes to invade arteries[7,8] was demonstrated both clinically and histologically in our case. The literature suggests that mortality from rhinocerebral phycomycosis is in excess of 50%.[6,8,9] Treatment consists of correcting underlying metabolic disorders, excising infected tissue, and administering amphotericin B; these procedures were successful in our patient. Hyperglycemia was brought under control soon after admission by administration of insulin. Necrotic tissue was excised and amphotericin B was instilled locally.[5] Initially, in an attempt to spare the transplanted kidney, immunosuppressive therapy was not discontinued nor was amphotericin B administered systemically. Because the infection progressed, these steps were initiated and the disease process was arrested.

The virtual lack of renal toxicity during the course of treatment was unusual. The only measurable adverse effect was inability to acidify the urine following an acid load. This defect apparently did not precede amphotericin B therapy, since pretreatment values for serum bicarbonate and chloride were repeatedly normal, but it has not resolved four months after cessa-

tion of therapy. It may have been caused by amphotericin B or by discontinuation of immunosuppressive drugs during therapy, or both. The mechanisms by which mannitol may provide this protective effect are unclear; prevention of amphotericin-induced renal vasoconstriction may be responsible.[6]

Reprint requests to Dr. Musher, Veterans Administration Hospital, 2002 Holcombe Blvd, Houston, Texas 77211.

Drs. Ortiz, Wolfe, Weinman, and Schloeder, Baylor College of Medicine, Texas Medical Center, Houston, Texas 77025.

Dr. Thorsteinsson, Slettahrauni 21, Hafnarfjördur, Iceland.

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Crohn's disease, colitis, or cancer?

R. F. Peterson, MD

This article reviews gross and microscopic features of Crohn's disease and ulcerative colitis, emphasizing some of the problems encountered in differentiating these entities and, occasionally, in differentiating them from other diseases. The association of cancer with ulcerative colitis has been recognized for years. During the past few years, a possible increased incidence of cancer associated with Crohn's disease has been under investigation.

"Crohn's disease" is only one of the many terms used to designate this entity commonly referred to as "regional enteritis." The disease has also been called "regional ileitis" or "terminal ileitis" when it occurs in the ileum. It has been referred to as "regional enteritis of the colon," "chronic ulcerative enteritis," "ileocolitis," "segmental colitis," "regional colitis," or "granulomatous colitis" when it involves the colon.[1] Perhaps "transmural colitis" is the term that best describes the disease because the pathologic process involves the full thickness of the bowel wall.

Crohn's Disease and Ulcerative Colitis

In Crohn's disease, the serosa has a dull, gray-red, granular appearance because of the serositis. The fat may involve more of the circumference of the bowel's external surface—a process that has been called "fat wrapping."[2] Large, succulent, mesenteric nodes usually are present. The wall of the bowel is thickened, and a stenotic segment may resemble a garden hose.[1] The mucosa characteristically has longitudinal rake or bear-claw ulcers[1] overlying the teniae.[3] The cobblestone appearance of the bowel mucosa is caused by transverse fissuring and submucosal edema.[1] The terminal ileum and right side of the colon are involved most frequently, and the distribution often is segmental.

The inflammation in Crohn's disease is transmural—that is, it involves all layers of the bowel wall. Korelitz and Sommers[4] found that, in sigmoidoscopically negative cases, macrophages were more numerous in the lamina propria connective tissue in Crohn's disease of the large bowel, but that mast cells, plasma cells, eosinophils, and neutrophils were more plentiful in ulcerative colitis. This difference in lamina propria connective tissue cells was obscured during active inflammation. Crypt abscesses occur in both diseases but are more common in ulcerative colitis. The ulcers in Crohn's disease begin by degeneration of the basal cells of the crypts and the process is always associated with lymphoid aggregates.[3] These ulcers are characteristically undermining. From 50 to 75% of the patients with Crohn's disease have granulomas[5]—hence, the term "granulomatous colitis." These are small, noncaseating, sarcoid-like granulomas that sometimes are indistinct.

The complications of Crohn's disease include strictures, inflammatory masses, and abdominal wall and internal fistulas. Toxic megacolon, a dreaded complication in patients with ulcerative colitis, is less frequent in Crohn's disease.[5]

Hawk and coworkers[1] reported rectal involvement in 60% of their patients with Crohn's disease. Rectal lesions occur in two forms: (1) lesions similar to those located elsewhere in the colon, and (2) fistulas.

A segment of rectum that I examined in 1968 presented some diagnostic problems.

Presented in the symposium on "Crohn's, Colitis, or Cancer" sponsored by the TMA Committee on Cancer and the American Cancer Society, Texas Branch, at the 1975 annual session of the Texas Medical Association.

The specimen, from a 58-year-old woman, resembled the fistula-ridden, scarred rectum that I had seen in a previous case of lymphogranuloma venereum. I was even more convinced of the diagnosis when I found abscesses with central necrosis and a wall of macrophages (Fig 1) similar to those seen in lymphogranuloma venereum. The clinicians assured me that this proper lady could not possibly have this disease. A few months later, Dr. Henry D. Janowitz visited Scott and White and showed examples of these rectal abscesses found in patients with Crohn's disease. Our patient had previously undergone resection for regional ileitis at another hospital.

Ulcerative colitis is primarily an inflammatory disease of the bowel mucosa, with the submucosa involved in severe cases. The ulceration is usually diffuse with a tendency toward longitudinal orientation overlying the teniae. Crypt abscesses and pseudopolyps are common. The muscularis mucosa thickens during the remission phase, and shortening of the colon occurs in chronic disease. Toxic megacolon and cancer are two of the most dreaded complications of ulcerative colitis.

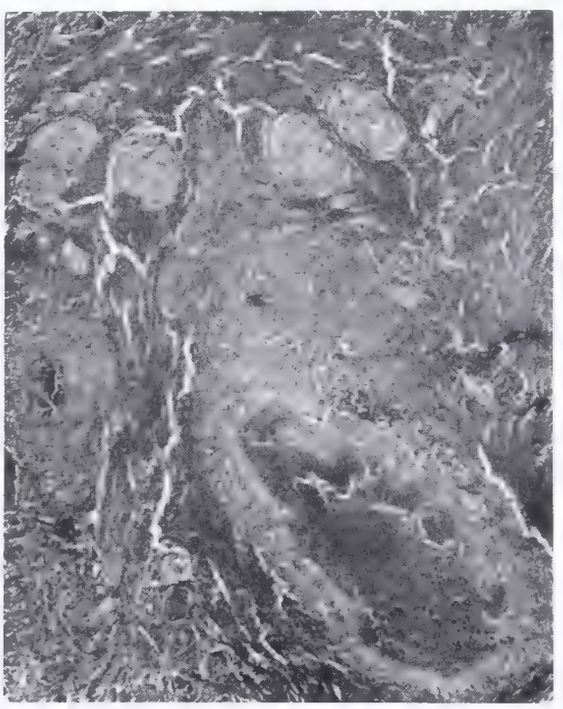
Ulcerative Colitis and Cancer

The greatest risk of cancer occurs in a patient with ulcerative colitis who has extensive or total involvement of the colon, who has had the disease for more than ten years, and whose disease began before he was 25 years old. The carcinoma associated with ulcerative colitis is frequently an aggressive neoplasm that arises proximal to the sigmoid colon and often is not detected until metastatic spread is too great for definitive treatment.[6]

The precancerous polypoid changes in patients with ulcerative colitis, reported in 1959 by Dawson and Pryse-Davies,[7] were described in detail by Morson and Pang[8] in 1967. The polyps are almost always multiple and sessile. The epithelial cells show loss of goblet cell secretion; the nuclei are stratified, hyperchromatic, and irregular in size and shape, and they show numerous mitotic figures. Morson and Pang[8] noted similar histologic precancerous changes in the flat mucosa. The mucosa is of normal or increased thickness. The glands lose their parallel polarity and become irregular in size and shape with lateral budding. Inflammation is variable in amount but seldom is severe and occasionally is absent. Late in 1972, Morson[9] wrote:

> The histologic criteria for a diagnosis of precancer in ulcerative colitis are insufficiently accurate at the present

1. Rectal abscess with central necrosis and wall of macrophages, similar to those of lymphogranuloma venereum, that was present in rectum of patient who had previous subtotal colectomy for regional ileitis. (Hematoxylin and eosin stain, X52.)



time . . . . In my experience so far it is only possible to make a diagnosis of precancer in the absence of much inflammation because of the difficulty of distinguishing genuine dysplasia from reactive hyperplasia.

When Ritchie and associates[10] combined their data with five other large series in the literature, they found 23 cases of biliary tract cancer in 5,665 cases of ulcerative colitis—an incidence of 0.4%. They estimated this to be ten times the incidence of biliary tract cancer in the general population. Four cases of hepatoma and eight cases of cholangiocarcinoma of the liver have been reported in patients with ulcerative colitis.[11]

Crohn's Disease and Cancer

Histologically, in Crohn's disease the mucosa between the ulcers remains relatively uninvolved, and it had been assumed that there was no increased incidence of associated carcinoma. Some recent studies indicate that this may not be true. Ginzburg and associates[12] reported the first case of adenocarcinoma associated with Crohn's disease of the small bowel in 1956. As of February 1975, 29 such cases had been reported.[2]

Saeed and coworkers[13] reviewed the 26 cases of cancer associated with Crohn's disease of the small bowel that they found in the literature in 1974. The five-year survival rate was 3.7%, and the mean length of survival was 6.6 months. Only 14% of the malignant lesions were diagnosed preoperatively.

In a review of the 29 cases reported by 1975, Savage and associates[2] found signet-ring cells to be the major cell type in 10 of the 14 cases in which the neoplastic cells were described. Thus, as in patients with ulcerative colitis, the associated carcinoma is often a high-grade malignancy.

Weedon and coworkers[14] found eight colorectal carcinomas in 356 cases of Crohn's disease of the colon in patients who had the onset of their transmural colitis before age 21 years. The malignant lesions became evident between 7 and 45 years after the initial symptoms of Crohn's disease. These authors concluded that North Americans who have Crohn's disease of the colon before they are 21 years old have an increased risk of adenocarcinoma.

Differential Diagnosis

In addition to the possible increase in the incidence of cancer in patients with Crohn's disease, the differential diagnosis between these two entities occasionally presents problems. On gross examination, the inflammatory masses of the cecum involved by Crohn's disease may be misdiagnosed as carcinoma. During the gross inspection, it is helpful to look at the cut surface of the thickened bowel wall. When involved by carcinoma or lymphoma, it appears homogeneous as the gross outline of the layers is lost. Crohn's disease accentuates the muscle bundles and makes them stand out—similar to smooth muscle bundles on the cut surface of a leiomyoma.

Roentgenologically, the stenotic lesions of Crohn's disease of the colon can mimic carcinoma. Marshak and associates[15] described six cases of granulomatous colitis in which single stenotic segments with eccentric lumens, irregular contours, and overhanging margins simulated the roentgenographic appearance of carcinoma.

A few other inflammatory diseases occasionally enter into the differential diagnosis of Crohn's disease and ulcerative colitis. Ischemic colitis has a more abrupt onset

than ulcerative colitis and occurs in elderly patients who have atherosclerotic vascular disease.[5] There is a chronic form of ischemic colitis that is segmental, usually involves the splenic flexure and upper descending colon, and will cause obstruction. This form can be confused clinically with carcinoma or Crohn's disease. Dense scar tissue and hemosiderin-laden phagocytes are present instead of granulomas or lymphoid aggregates.[3]

Pseudomembranous colitis and staphylococcal enterocolitis usually can be related to antecedent surgical procedures or antibiotic therapy.[5]

Necrotizing enterocolitis with its greenish brown patches of necrosis has been related to a toxin from *Clostridium welchii*.[3]

Colitis cystica profunda is the result of epithelialization of deep ulcers and is not a separate entity. The process can occur with any ulcerative lesion and can be difficult to distinguish from carcinoma.[3] In a biopsy specimen exhibiting mucus-filled submucosal cystic lesions and overlying squamous metaplasia from high in the rectum, I had favored a diagnosis of colitis cystica profunda. The patient later was proved to have adenocarcinoma.

Amebic ulcers can cause problems in differential diagnosis.[5] I have seen a colon diffusely involved with amebic colitis removed surgically. The preoperative diagnosis was ulcerative colitis.

Diverticulitis may cause an obstructive lesion, and the diagnosis can be confused with carcinoma or Crohn's disease—or the reverse may occur.

Because of my difficulty in differentiating Crohn's disease of the rectum from lymphogranuloma venereum in the case described earlier, I was glad to see that Sachar and Janowitz[5] included this differential point in their review of ulcerative colitis and Crohn's disease.

Occasionally, ulcerative colitis cannot be differentiated from Crohn's disease of the colon; Hawk and coworkers[1] were unable to make this distinction in approximately 10% of their 151 cases.

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Dr. R. F. Peterson, Scott and White Clinic, Temple, Texas 76501.

Colonoscopy in diagnosis and polypectomy

Leopold Richard, MD; M. Reza Jahadi, MD; Daniel E. Polter, MD

The diagnostic and therapeutic applications of colonoscopy have constantly expanded since the earliest attempts at fiberoptic examination of the colon.[1,2] The low morbidity and mortality associated with snare excision of colonic polyps has been reported.[1,3,4]

Stimulated by various reports on the safety of this procedure, we began using fiberoptic colonoscopy in our hospital in October 1972. In our experience, the increasing popularity of this modality is justified.

Material and Method

Records of all patients who underwent colonoscopy at Baylor University Medical Center between October 1972 and February 1975 were reviewed. Information from each record was abstracted for detailed analysis.

The bowel preparation used was the standard mechanical preparation, consisting of a clear liquid diet for two days, strong cathartics for a day, and cleansing enemas a few hours before the procedure. If any subsequent surgery was contemplated, a chemical bowel preparation was added.

Presented at the 14th annual meeting of the North Texas Chapter, American College of Surgeons, May 1975.

Sedatives and analgesics usually were administered at the time of the procedure when needed. The instruments used were either ACMI or Olympus fiberoptic colonoscopes. Occasionally fluoroscopy was utilized to facilitate various maneuvers for advancing the scope.

When a polyp was encountered it was simultaneously excised using snare electrocoagulation. Whenever multiple polyps were found the one most likely to yield significant pathological findings was snared first.

Results

A total of 184 patients underwent colonoscopic examination during 2½ years. There were 97 males and 87 females; 62% of the patients were Caucasian. The ages ranged from 14 to 91 years, with an average of 54 years.

The indications for colonoscopy are summarized in Fig 1. Established colonic blood loss of unknown cause and abnormal results of barium enema examinations accounted for 62% of the cases. Miscellaneous indications included unexplained weight loss and anemia.

All the patients had barium enema examinations before colonoscopy. Of these, 30 were interpreted as negative. However, subsequent colonoscopic examina-

1. Indications for colonoscopy.

Indications	No. of Patients	%
Lower gastrointestinal bleeding	70	38
Abnormal barium enema findings	45	24
Unexplained colonic symptoms	26	14
Surveillance of cancer-prone colon	16	9
Assessment of inflammatory bowel disease	10	6
Miscellaneous	17	9
Total	184	100

2. Incidence of polyps.

No. of Patients	No. of Polyps	%
39	1	67
12	2	
3	3	
2	4	33
1	5	
1	6	
Total 58	91	100

tion revealed abnormalities in 14 patients, two of whom were found to have infiltrating carcinoma of the colon. In 154 patients barium enema examination showed a filling defect, but in only 118 patients could a lesion be found. Barium enema examination in 101 patients revealed a solitary primary lesion. However, colonoscopic examination showed multiple lesions in the colon in 22 of these patients.

During this period, we performed 58 colonoscopies with removal of 91 colonic polyps. In 33% of the patients, more than one polyp was removed (Fig 2). Sizes and locations of the polyps are shown in Figs 3 and 4. Two polyps could not be recovered after snare polypectomy, but the histological diagnosis of the remaining 89 polyps is shown in Fig 5.

Seven patients bled following snare cautery of polyps; four required at least one transfusion. In one patient, a laparotomy with suture ligation of a bleeding colonic vessel had to be performed. Perforation occurred in one case. A snare polypectomy was performed to remove a 3 cm flat polyp in the upper sigmoid colon, and the pathological report indicated infiltrating adenocarcinoma. This patient underwent laparotomy five days later for an elective colon resection, and at that time an unsuspected perforation of greater than 1 cm was found at the site of polypectomy. The perforation had been sealed spontaneously by pericolic fat. Preoperatively, there were no positive abdominal findings, and retrospectively, the patient denied any abdominal symptoms (Fig 6).

3. Size of polyps.

Size, cm	No. of Patients	%
0.5-1.0	40	44
1.1-2.0	40	44
2.1-3.0	9	10
3.1-4.0	2	2
Total	91	100

Comments

The colonoscope has added a new dimension to the diagnosis and treatment of diseases of the colon. Several years ago, indi-

4. Location of polyps.

Location	No. of Patients	%
Sigmoid colon	25	27
Descending colon	44	48
Transverse	17	19
Ascending colon	3	3
Cecum	4	4

5. Histopathology of polyps.

Histology	No. of Patients
Adenomatous polyps	68
Villoglandular adenomas	12
Villous adenomas	7
Infiltrating carcinoma	2
Total	89

6. Complications of colonoscopy.

Complications	No. of Patients	%
Bleeding	7	3.6
Transfusion required	4	
Laparotomy required	1	
Perforation	1	0.5
Polyps lost	2	1

cations for colonoscopy were quite specific, but with improved instrumentation and technique, indications have expanded. Perhaps the primary indication is any colonic symptom or abnormality that is unexplained and needs further clarification. Colonic blood loss of unknown cause and abnormal findings on barium enema examination of the colon were the most frequent indications for performing colonoscopy in this series.

Sugarbaker and Vineyard[4] showed that colonoscopy was an effective method of differentiating diverticulitis from carcinoma. We agree that the criteria for the definitive diagnosis of cancer should be a positive finding at biopsy, whereas the criterion for exluding carcinoma is a complete examination through the lesion without visualization of mucosal defect. However, in a small group of patients, complete examination of the involved segment is not possible because of narrow lumen. These patients should be assumed to have malignant conditions. In 15 patients in this series barium enema examination showed a contracted segment of sigmoid colon suggestive of diverticulitis. Colonoscopic evaluation and biopsy of these areas revealed carcinoma in three cases.

A significant number of colon cancers diagnosed only by colonoscopy have been previously reported.[5,6] We have had two similar experiences in our series. Both of these patients have had negative barium enema examinations, but their lesions were diagnosed by colonoscopy.

Adenocarcinoma may exist within polyps of varying histological types. In this series, three polyps which were removed showed superficial carcinoma and two polyps showed invasive carcinoma. We feel that the definitive treatment of malignant polyps should be determined by the gross structure and extent of cancer invasion. Fenoglio and his coworkers[7] have shown that there is no risk of local recurrence or distant metastasis in patients with carcinoma that fails to invade the muscularis mucosa, because the lymphatic channels do not extend beyond the muscular coat of the bowel. Our material also suggests that pedunculated polyps, when the stalk is clear of cancer, can be cured through colonoscopic polypectomy, thus obviating the need for laparotomy. At present, however, more cases and a longer follow-up are needed before this can be definitely established. In any event, we believe that as Rider and his associates[8] have shown, these patients have demonstrated an increased tendency toward cancer of the large bowel at other sites, and continued close follow-up is indicated.

Patients with polyps containing invasive carcinoma and those in whom the extent of invasion cannot be assessed should have definitive surgical procedures.

In this series, two patients with invasive carcinoma have had resection after colonoscopic polypectomy. In one patient, no residual malignant lesion was found in the pathologic specimen. In the second patient, a residual tumor was found during operation, but results from tests on lymph nodes were negative.

With the tremendous increase in number of colonoscopic procedures being performed, the incidence of complication is difficult to ascertain. Perforation is the most serious complication. Geenen,[9] in his survey of 1,106 colonoscopies, found a 0.9% incidence of perforation. We had only one such complication, an incidence of 0.5%. This perforation was probably caused by coagulation necrosis of the bowel wall; it had been spontaneously sealed off and perhaps would not have been discovered if patient had not had a laparotomy.

The incidence of bleeding reported varies from 0.1 to 2.7%.[2,5] A 3.8% incidence of bleeding in our series represents a higher complication rate than reported by others. However, in only one instance was laparotomy for the arrest of bleeding necessary.

The other complications which have been reported included retroperitoneal emphysema,[10] tear of the mesosigmoid,[3] serosal tear of the sigmoid,[11] fractured snare wires,[12] and perforation caused by excessive insufflation.[6] These complications did not occur in our series.

Our experience with this procedure has been gratifying. It has proven to be a safe, effective, and reliable diagnostic and therapeutic modality. This procedure has considerably reduced the cost for our patients, and allowed early return to work and normal activities without a long and painful postoperative period.

Summary

Our 2½ years' experience with colonoscopy, embracing 184 patients, is reported, and indications and techniques are briefly discussed. During this period, 58 colonoscopies for removal of 91 colonic polyps were performed. One perforation of the sigmoid from removal of a small carcinoma was found incidentally at laparotomy. There were seven instances of bleeding, but only one patient required laparotomy.

Colonoscopy was found to be a safe, effective, and reliable diagnostic and therapeutic modality.

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Drs. Richard and Jahadi, Department of Colon and Rectal Surgery; Dr. Polter, Department of Gastroenterology, Baylor University Medical Center, Dallas, Texas 75246. Reprint requests to Dr. Richard.

Induced abortion in Texas

Lewis H. Roht, MD, MPH; Ruth O. Nelson, MA; Paul Callen, BS

In January 1973 the Supreme Court legalized induced abortions in the United States. Before that decision, only 17 states permitted therapeutic abortion for maternal health, rape, or incest.[1] Women desiring abortions for personal or economic reasons obtained them in foreign nations, or from physicians who, euphemistically, did "therapeutic" or "diagnostic" procedures, or from illegal abortionists. Due to the clandestine nature of abortion, little was known about its epidemiology or its effect on women's health.

Due to the Supreme Court decision, an abortion may be readily obtained in almost all states. Many states monitor the extent to which induced abortion is used. Some have legislated reporting, usually administered through the state health department, while others have unofficial reporting mechanisms; that is, statistics are compiled by interested persons on their own initiative. Whether "official" or "unofficial," reporting is essentially voluntary since there is no realistic means of compelling hospitals, clinics, or physicians to comply with a reporting law. National abortion statistics summarizing both official and unofficial sources are compiled and published each year by the Family Planning Division of the National Center for Disease Control (NCDC).[1]

Currently no official reporting mechanism exists in Texas. Although the 1975 session of the state legislature considered several abortion reporting bills, none was passed. This is troubling to those interested in the epidemiology of abortion because Texas contains the third largest number of reproductive age women in the United States. This study was undertaken in response to a request from the NCDC, and because virtually nothing was known about abortion practices in Texas. It was assisted by the endorsement of the Texas Association of Obstetrics and Gynecology, the Texas Medical Association Committee on Maternal and Child Health, and the Executive Directors Council of the Planned Parenthood Federation, and the cooperation of health personnel interested in studying abortion.

This article describes the epidemiology of induced abortion in Texas in 1974-1975. A later report will examine the relationship between abortion, fertility, maternal mortality, and infant mortality.

1. Abortion reporting by type of facility, Texas, 1974.

Facility	No.	Responses No.	Responses %	Respondents Reporting Abortions No.	Respondents Reporting Abortions %	Reported Abortions
General hospitals						
Small <99 beds	367	131	35.7	22	16.8	226
Medium 100-199 beds	89	55	61.8	24	43.6	1,317
Large ≥200 beds	49	47	95.9	28	60.0	6,673
Military hospitals	18	15	83.3	7	46.7	599
Clinics	20	20	100.0	20	100.0	24,888
Physicians (offices)		11		11		1,678
Other	170	35	20.6	1	2.9	1
Total	713*	314	43.1*	113	36.0	35,382

*Excludes physicians offices

Methods

A letter requesting the number of induced abortions performed in the calendar year 1974 was mailed to all hospitals and clinics identified from the current register of "Hospitals and Related Institutions in Texas" compiled by the Texas Hospital Association.[2] A similar letter was mailed to free-standing abortion clinics identified through communication with physicians, clinics, and knowledgeable persons throughout the state. A second mailing and telephone followup to hospitals containing over 200 beds was used.

Some clinics, hospitals, and private physicians agreed to provide demographic and clinical information about their patients, without identifying patients by name. Data were collected monthly from sources in Houston, San Antonio, Dallas, and El Paso from November 1974 to June 1975.

Computer analysis was performed using the Statistical Package for the Social Sciences (SPSS).

Results

Fig 1 shows the response rate and number of abortions by type of facility. The category "general hospital" includes all city, county, private, corporate, osteopathic, and non-Catholic church hospitals identified in the THA registry. Catholic hospitals, special service hospitals (geriatric, convalescent, rehabilitation, psychiatric, alcoholic, and tuberculosis), Veterans Administration and prison hospitals, and medical/surgical clinics comprise the "other" category.

A total of 35,382 abortions were identified from 314 respondents, with a response rate of 43.1%. The percentage is misleading since most nonresponse was for the category "other." Small and medium-size general hospitals had lower response (35.7% and 61.8%) than large hospitals (95.9%). Smaller hospitals reported 226 procedures, most of which were therapeutic abortions. Medium sized hospitals reported 1,317 abortions while larger hospitals reported 6,673 abortions, the majority of which were elective rather than therapeutic. Because small hospitals do not seem to perform many abortions, the low response rate is not disturbing. Moreover, nonresponse was generally confined to those located in smaller cities and towns, areas in which our inquiries indicate abortion services are not readily available. Patients from

2. Abortions, abortion/live birth ratio, and rank by state, USA, 1973.[1]

State	No. Abortions	Abortions/ 1,000 Live Births Ratio	Ratio Rank, All States
District of Columbia	40,812	3,766	1
New York	203,358	852	2
California	131,870	443	3
Alaska	1,165	175	14
New Jersey	10,047	107	24
Pennsylvania	15,100	98	26
Texas, 1973	14,255	65	31
Total, USA	615,831	210	
Texas, 1974	35,382	162*	15

Reference: Center for Disease Control Abortion Surveillance Annual Summary, 1973, issued May, 1975.[1]

*Based upon live births in 1973.

3. Abortions by age of woman, Texas 1974-1975.

Age in Years	No.	%
≤14	53	1.6
15-19	1,093	33.6
20-24	1,046	32.2
25-29	558	17.2
30-34	283	8.7
≥35	187	5.8
Not stated	29	0.9
Total	3,249	100.0

4. Abortions by marital status, Texas 1974-1975.

Marital Status	No.	%
Married	789	24.3
Never married	1,872	57.6
Other	518	15.9
Not stated	70	2.2
Total	3,249	100.0

5. Abortions by state of residence, Texas 1974-1975.

State of Residence	No.	%
Texas	2,818	86.7
Other	388	11.9
Not stated	43	1.3
Total	3,249	99.9

6. Abortions by education, Texas 1974-1975.

Years of Education	No.	%
0-9	224	6.9
10-12	1,405	43.2
13-16	897	27.6
≥17	39	1.2
Not stated	684	21.1
Total	3,249	100.0

7. Abortions by race, Texas 1974-1975.

Race	No.	%
White	1,191	81.9
Black	247	17.0
Other	16	1.1
Total	1,454	100.0

8. Percentage distribution of abortions by age and race, Texas 1974-1975.

Age in Years	% Distribution White	Mexican-American	Black
≤14	2.0	3.0	4.5
15-19	36.4	22.7	32.4
20-24	27.0	32.0	28.3
25-29	17.4	23.2	19.4
30-34	10.8	6.9	9.7
≥35	6.3	12.3	5.7

these areas are apparently referred to the clinics in larger cities. If one assumes that the nonresponding hospitals perform abortions at the prevailing rates, an additional 1,505 abortions would be detected, suggesting that the survey detected 84.5% of hospital abortions. The estimate also assumes that diagnosis was accurately reported by the physician.

Clinics, all of which were located in the larger cities, reported 24,888 abortions, approximately 70% of the total. We believe that major abortion clinics in the state were identified and that the data are complete.

Military hospitals reported 599 abortions. All of the larger military hospitals are included.

Although a large roster of physicians who perform abortions was compiled, only a few responded that they perform office procedures. The relatively large number (1,678) reported by only 11 physicians suggests that a considerable number of abortions are performed in doctors' offices and most have not been identified. Inability to collect data from this source is a limitation of this study.

The completeness of reporting can be estimated by comparison with data from other states. A commonly used indication of utilization is the ratio of abortions per 1,000 live births in a calendar year. Fig 2 shows the ratio in 1973 for several states as well as the rank compared to other states. While incomplete reporting exists everywhere, states with official reporting systems such as New York and California show a considerably higher ratio than Texas. Although differences in maternal age, contraceptive practices or fertility might exist between states, incomplete reporting is a major cause of variation in the ratio. Better reporting in 1974 increased

Texas' ratio from 65 to 162/1,000 live births. Although a better estimate, it is not exact because of nonreporting from hospitals and physicians, and because the extent of outmigration of abortion patients cannot be determined. It is known that many Texas women obtained abortions in other states[1] as well as in Mexico during 1973. Communication with physicians near the Mexican border and in New York and California indicates that substantial numbers of women still leave Texas to obtain abortions.

Figs 3 and 4 show the reported abortions by age and by marital status, indicating that abortions are obtained by the young and the unmarried. Approximately one-third (35.2%) of the procedures were obtained by teen-agers, one-third (32.3%) by women 20-24, and 14.5% by women older than thirty. Almost three-fourths (73.5%) of women were not married at the time of the procedure. Although most of them had never married, a substantial proportion (15.9%) were separated, divorced, or widowed. These data are consistent with national trends for abortion utilization.[1]

Figs 5-7 show the distribution of abortions by state of residence, education, and race. A modest proportion (11.9%) of nonresidents traveled to Texas from nearby states, particularly Louisiana and Mississippi where such services are limited.

Abortion utilization is not confined to any social class or group. Slightly over half of the abortions were to women with 12 or less years of education. Those "not stated" were primarily limited to two facilities whose patients tend to be upper-middle class and most women have probably had some college education.

Although several facilities did not indicate the patient's race, the reported data, as well as some communicated from other clinics who were not able to regularly participate in the study, indicate that 17% of abortions were to blacks, about 10% were to Mexican Americans, and 70% were to whites. In the table, Mexican Americans are included in the total for whites. These totals suggest that blacks are over-represented and Mexican Americans under-represented compared to the racial distribution of the state.[3]

Age distribution by major population groups (Fig 8) shows a strikingly similar pattern for whites and blacks, with two-thirds (65%) of the patients younger than 25. Although the majority of Mexican Americans using abortion also were younger than 25, a smaller proportion of younger women were reported (58%).

9. Gestation by marital status, Texas abortions, 1974-1975.

	Duration of Gestation in Weeks											
	1-7		8-12		13-16		≥17		Not Stated		Total	
Marital Status	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Married	223	24.3	482	25.7	50	17.9	12	13.7	22	24.4	789	24.3
Never Married	522	56.8	1,060	56.6	191	68.5	64	73.6	35	38.9	1,872	57.6
Other	163	17.7	303	16.2	33	11.8	8	9.2	11	12.2	518	15.9
Not stated	11	1.2	29	1.5	5	1.8	3	3.4	22	24.4	70	2.2
Total	919	100.0	1,874	100.0	279	100.0	87	99.9	90	99.9	3,249	100.0

Length of gestation is tabulated by marital status in Fig 9. There was no difference in marital status between women pregnant for 1-7 or 8-12 weeks. After 12 weeks, there was a large increase in the proportion of women never married. About 70% of late abortions were to never married women, the majority of whom were under 20 (Fig 10). Women under 15 years of age also tendedto abort later than those ages 15-19.

The data in Figs 9 and 10 suggest two types of response to pregnancy by young, never married women; one group aborts early and a second group seeks late abortion. The reasons for late abortion are not known, but may include delay because (1) the woman does not realize she is pregnant, (2) she cannot afford the procedure, (3) she is confused and uncertain whether to continue the pregnancy or abort it, and (4) she is hoping the pregnancy will resolve itself without any action on her part.

10. Gestation by woman's age, Texas abortions, 1974-1975.

Age in Years	Gestation in Weeks (%) 1-7	8-12	13-16	≥17	Total
≤14	17.0	60.4	9.4	13.2	100.0
15-19	22.9	60.9	12.5	3.6	99.9
≥20	33.5	57.3	6.6	2.5	99.9

11. Previous abortions by woman's age, Texas 1974-1975.

Age in Years	Previous Abortions 0 No.	%	1 No.	%	≥2 No.	%	Total No.
≤14	25	98.1	1	1.9	—	—	53
15-19	1,001	92.7	75	6.9	4	0.4	1,080
20-29	1,291	82.5	244	15.6	30	1.9	1,565
≥30	368	80.9	67	14.7	20	4.4	455
Total	2,712	86.0	387	12.3	54	1.7	3,153*

*Not stated=96 (3.0%)

Finally, it should be noted that abortions after 12 weeks comprised 11.3% of the total reported. This is probably a reasonable estimate of the actual percentage since second trimester abortions ranged from 10-17% of the total in facilities which performed those procedures. Since not all facilities perform late abortions, the estimate would be expected to fall closer to the lower percentage. Concern over the number of second trimester abortions arises because of the increased morbidity and mortality compared to early abortion.[4]

The number of previous abortions, which is solicited as part of the pregnancy history, is tabulated by age (Fig 11). While the majority (86%) of women did not admit to a previous abortion, the remainder (14%) constitutes a sizable minority. Moreover, personnel at several facilities indicated that they are seeing some women for repeat abortions within one year.

Although induced abortion is a safe and effective means of terminating an undesired pregnancy, it requires a considerable expenditure of physicians' time and patient's money. Assuming the average abortion costs $175, $6.2 million were spent on those procedures identified by this study. It is important, therefore, to know the potential for preventing unwanted pregnancies. Fig 12 shows the use of contraceptive methods within one year of the abortion by age. Two-thirds of all women, and over 80% of teen-age women, reported no method used. Oral contraceptives were the most popular method, reported by 17.9% of women. Of particular interest is the small proportion of women of all ages and parity who reported using an IUD.

All facilities in this study offer contraceptive counseling. Fig 13 lists the contraception methods accepted. Three important facts emerge: (1) two-thirds of all patients received or were prescribed oral contraceptives, (2) a small proportion (6.6%) received an IUD, while (3) a substantial number (9.8%) many of whom were teen-agers, declined any method. The proportion of declining women was similar at different facilities, ranging from 9 to 15%. It is not known how many declining women received contraceptives from another source such as a family doctor.

Discussion

Because the data were not collected using a prescribed sampling technique, they may not necessarily be representative of all abortions done in Texas. However, analysis indicates that the utilization and proportional distribution of important variables is similar for data from large and small clinics, hospitals, and physicians in private practice. For this reason the authors believe that these data are representative of abortions performed in Texas.

Although most data were collected during the first half of 1975, direct extrapolation of demographic variables to the total abortions reported for 1974 may be done if one assumes that these characteristics remained constant throughout the 18-month period. Inspection of data from different facilities indicates that the demographic characteristics of patients were in fact similar between January and June 1975, suggesting that these characteristics do remain constant over a short time period.

The major findings of this study are that abortion is used most by young and

13. Contraceptive method accepted by abortion patients, Texas 1974-1975.

Contraceptive Method	Acceptors	
	No.	%
IUD	213	6.6
Oral	2,196	67.6
Other	155	4.8
Tubal ligation	46	1.4
Vasectomy	30	0.9
None	320	9.8*
Not stated	289	8.9
Total	3,249	100.0

*None=9–15%

12. Contraceptive method within one year of the abortion, by woman's age, Texas 1974-1975.

Age in Years	None		IUD		Oral		Other		Total
	No.	%	No.	%	No.	%	No.	%	
≤14	44	97.8	—	—	—	—	1	2.2	45
15-19	799	82.9	6	0.6	100	10.4	59	6.1	964
20-24	556	59.0	31	3.3	213	22.6	143	15.2	943
25-29	259	53.2	28	5.7	117	25.1	83	17.0	467
30-34	103	46.0	14	6.3	57	25.4	50	22.3	224
≥35	84	57.9	3	2.1	16	11.0	42	29.0	145
Total	1,845	65.7	82	2.9	503	17.9	378	13.5	2,808*

*Not stated=441 (13.6%)

unmarried women (including divorced, widowed, and separated); that teen-agers tend to have their abortions later than older women; and that no contraception was used by the majority of women utilizing the services of facilities participating in this study.

Contraceptive use by abortion patients may be divided into three groups: those who use no contraception, those who use a method improperly, and those who become pregnant despite conscientious and proper use. Most abortion patients are included in the first two categories, implying that better education might help to prevent unwanted pregnancy. Although women do receive counseling, it is troubling to think that they must have an abortion to learn about or receive contraceptives. Moreover, it is abvious that a considerable number of women are not learning effective contraception, as many report previous abortions. This is of particular concern for the young women who still have many years of reproductive life. While some may consider abortion preferable to delivery of an unwanted child, studies suggest that abortion may cause an unfavorable outcome in a later pregnancy.[5,6] Physicians, educators, and parents should be aware of the risks of abortion and the extent to which unprotected intercourse occurs. They must devote efforts to teaching the value and proper use of contraceptive methods.

Oral contraceptives are the method most frequently recommended to abortion patients. They are used almost exclusively for teen-agers, and although the proportion declines with age, more than 80% of all contraception acceptors were given oral agents, as shown in Fig 14. It is not known whether this is due to patient or physician preference. While the short-term risks associated with oral agents is small, little is known about the effects of prolonged use or the possibility of a delayed effect such as the alleged carcinogenic property of DES.[7] One must consider whether more conservative use of oral agents is advisable.

Recent studies have shown that IUD's can be safely inserted immediately following induced abortion,[8] and that retention rates are good.[9] In addition, the cost and maintenance of IUD's are low, causing us to wonder why IUD's are not provided more frequently. It is possible (but unlikely) that some women are given oral agents temporarily and instructed to return at a later date for either an IUD or diaphragm.

An important but little discussed aspect of abortion is the extent to which isoimmunization of an Rh-negative mother by Rh-positive fetal blood is affected by early abortion.[10] Because increased Rh-positive titers may be detected at abortion, RhoGAM, an immune globulin, is recommended for Rh-negative abortion patients. Data from study participants indicates that the number of patients receiving RhoGAM corresponded to the expected distribution of Rh-negative factor in abortion patients. For this reason, isoimmunization of Rh-negative women is not expected to be significantly increased by current abortion practices.

14. Oral contraceptives as a percentage of birth control acceptors by woman's age, Texas 1974-1975.

Age in Years	No. Acceptors Orals	No. Acceptors All Methods	%
≤14	33	35	94.3
15-19	835	886	94.2
20-24	743	886	83.9
25-29	349	470	74.3
30-34	161	229	70.3
≥35	83	143	58.0
Total	2,204	2,649	83.2

Finally, we emphasize that abortion reporting provides useful information to those concerned with maternal and child health, abortion, and family planning services in Texas. Information collected by a reporting system helps to identify high-risk groups in need of these services and also assists the interpretation of important health indicators such as maternal and infant mortality rates. If properly organized, monitoring of clinical information, including detection of surgical complications and differences in medical procedures can be achieved.

It is our hope that the value of abortion reporting will be recognized and encouraged in the future. This can be achieved through support from political, medical, and public health agencies and groups throughout Texas.

Summary

A survey of hospitals and clinics identified 35,382 induced abortions performed in Texas in calendar year 1974. Demographic characteristics of abortion patients were determined from facilities in Houston, San Antonio, Dallas, and El Paso between November 1974 and June 1975. Abortion was used primarily by young or unmarried women. Contraception before and after the abortion are discussed.

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The authors, The University of Texas Health Science Center, P. O. Box 20186, Houston, Texas 77025.

The clinician's prerogative to request an autopsy

Gilbert E. Corrigan, MD, PhD

Although the medical examiner-coroner has the legal authority to investigate death and order autopsies upon bodies in question, the prerogatives of a physician-clinician to request autopsies of his deceased patients has not been discussed recently.

It has been an implicit understanding that the clinician has the prerogative of requesting an autopsy when the pathological and institutional facilities are available and functional; that the clinician may enter into a valid functioning autopsy contract with the family; and that autopsy is beneficial and desirable for the family, the clinician, and the institution.[1] All of these privileges and conditions now are under review.[2] The review is conditioned by many factors including a change in the clinical methods for disease diagnosis and analysis, an institutional change conditioned by accreditation groups, and a complex attitudinal and role-playing change by many pathologists.[3]

These factors have been delineated in many recent articles.[3-6] A symposium on the geriatric autopsy has appraised all of the current factors and phenomena related to the changing conditions of the autopsy with the changes in the care and diagnosis of the aged.[7,8] A recent debate presents the current thinking of many pathologists.[9,10] While a continual flow of articles demonstrates the validity of the autopsy in quality control of patient care and management, few have expressed the limitations of the autopsy, and none deny its beneficial and significant role in disease analysis. The consequences of dropping the autopsy requirements for hospital accreditation are not yet fully evaluated.[11,13] The need for autopsies is supported by teachers, researchers, and guardians of standards of patient care, but no one has stated the clinician's privileges in the matter of the autopsy. Since the standards of medical practice ultimately lie in the hands of the medical practitioner, his liberties with the use of the autopsy are paramount. The autopsy is a final informational device, of known scientific caliber, which helps him correlate the patient's disease with the care given.

The clinician provides the essential link in the complex of disease-patient-doctor-institution-care system. He determines the frequency and nature of the autopsy. The clinician has the option not to ask for an autopsy, while the family may seek either medical or legal counsel. The physician's scientific role as a truth seeker in the precise diagnosis of disease prompts use of the autopsy. Historically, however, American physicians have not had universal access to the autopsy, nor has medical practice actually been conditioned by autopsy results.

Although a clinician is required to report certain types of deaths to governmental authorities, he is not required to request autopsies, nor are the governmental authorities required to obtain an autopsy in each instance of such reportable deaths. (A recent California law relating to crib deaths is an exception.)

All medical scientists understand the importance of the absolute freedom of the clinician, in the instance of death of a private patient, to establish an autopsy contract. The access to the autopsy should be unhindered by political, institutional, or other factors which restrict the availability of the autopsy to the point of inaccessibility. Autopsies should be accessible to all

clinicians who want autopsies on their patients providing the contract is made properly.

Interests which may operate against this accessibility occur within the clinician himself; within the institution; within the deceased, the family, and the undertaker; within the pathologist; within the third party of the medical economical system; and within the coroner-medical examiner system. All have been recognized and their role in the autopsy discussed. All have been informed to some degree of the benefits derived from autopsy, but an emphatic statement of the clinician's privilege to arrange the autopsy has not been emphasized. This privilege is not indissolvable. The interests of the other groups mentioned can act to restrict this privilege until it is virtually nonexistent.

The autopsy privilege, however, can be protected. As educators we can teach medical students the significance and use of the autopsy;[14-16] as interns and residents we can demonstrate its clinical use;[17] as physicians we can teach a rational approach to death and disease through the autopsy.[5] The goal is a full understanding of disease in all people, gained by utilizing all knowledge from each patient's disease. At all levels of administrative detail it is necessary to provide the clinician with all the information. Progress will result. The capabilities of autopsy diagnosis are increasing, and this valuable method for the study of disease must be retained for the use of the clinician.[5]

The physician should be aggressive in claiming his prerogative to an autopsy on his patients. Hard established precedents and institutional understandings should anticipate the problems through which autopsies are lost due to administrative errors. Certainly clinicians should guard their autopsy privileges and insist on speedy, thorough autopsies performed by capable pathologists. They should not allow delay or ineptitude. They should require that the autopsy be performed upon receipt of the permission lest the family change its mind after commencing burial arrangements. The clinician must maintain a vigilant attitude or the autopsy privilege will be lost by erosion.

The autopsy is in fact a beginning. It provides the final evidence by which a diagnosis of a disease may be established.[18] Upon the surety of this diagnosis, further studies into the epidemiology of the disease are possible and inquiries into environmental exposures, work-associated exposures, and other hazards inapparent at the time of clinical study may be carried out with reassurance. A definitive search for causative factors is possible. Discovery of the etiological factors of disease as revealed by the autopsy is one of the initial steps in preventive medicine.

The autopsy is an implicit positive privilege within the bounds of the doctor-patient relationship.[19] As it is the duty of the physician to practice scientific medicine, it is his privilege to have the scientific autopsy information to complete his investigation.

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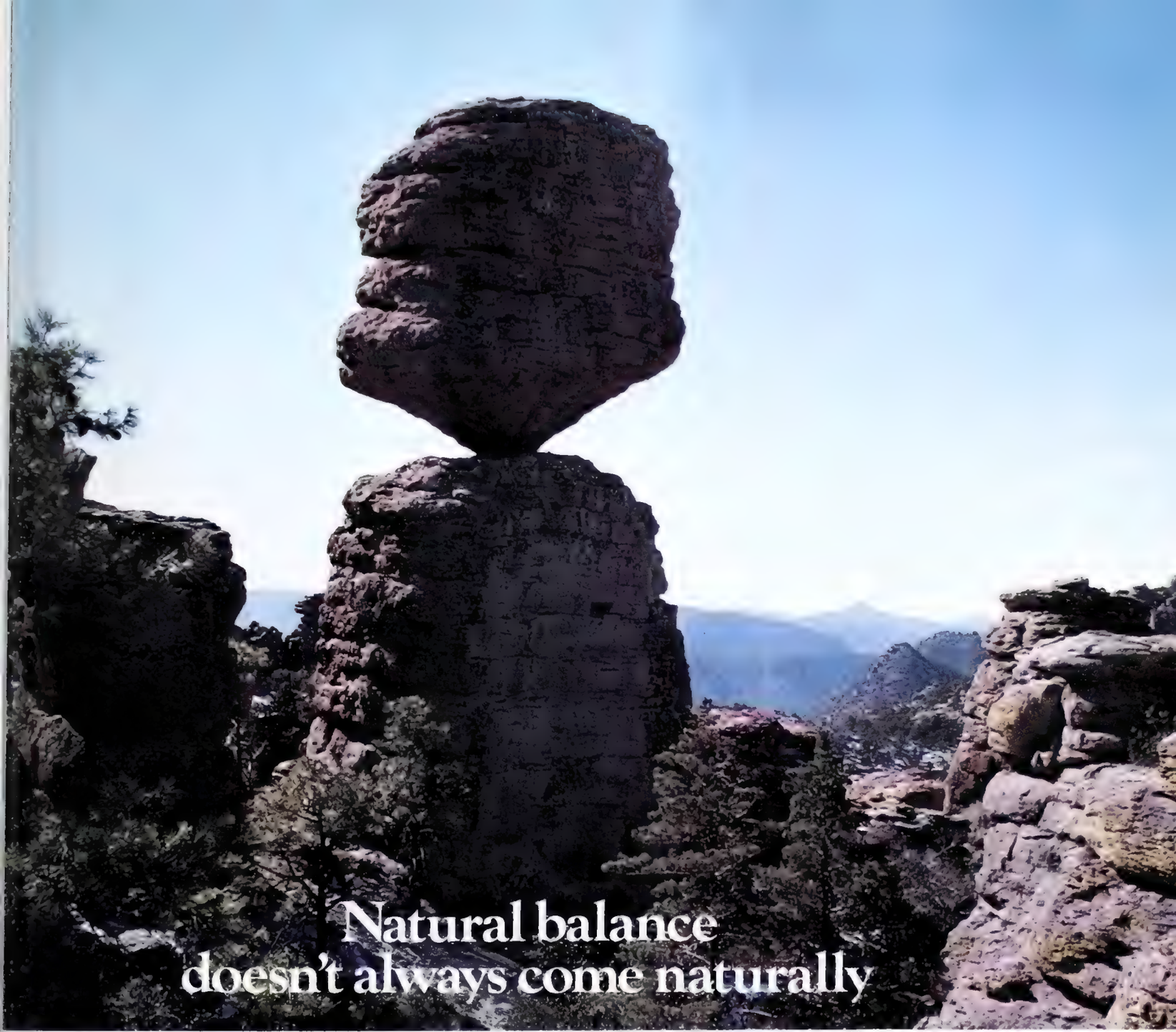
Dr. Corrigan, 5922 Rinkus, Leon Valley, Texas 78284.



Big Balanced Rock, Chiricahua Mountains, Arizona (approx. 1,000 tons)

Found useful in the management of vertigo* associated with seases affecting the vestibular system.

Can relieve nausea and vomiting often associated with vertigo.*

Usual adult dosage for Antivert/25 for vertigo:* one tablet t.i.d.

Also available as Antivert (meclizine HCl) 12.5 mg. scored blets, for dosage convenience and flexibility.

Antivert/25 (meclizine HCl) 25 mg. *Chewable* Tablets for ausea, vomiting and dizziness associated with motion sickness.

IEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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for vertigo*

Effectiveness across the spectrum of most common forms of insomnia

Awake too long, awake too often, awake too early...

These are the most common forms of insomnia, and may occur singly or in any combination. The night of troubled sleep depicted here comprises all three types. As the night progresses from left to right, each sleep stage is identifiable by its own shade of gray. Blue represents "Awake."

As you can see, this hypothetical "patient" takes well over an hour to fall asleep, awakens several times during the middle of the night and awakens too early in the morning.

Sleep Stages

- Awake
- REM
- Stage 1
- Stage 2
- Stage 3
- Stage 4

The insomnias most often occurring in young and older adults

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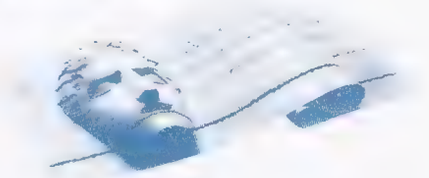
The relative safety of Dalmane (flurazepam HCl) is well documented

Dalmane (flurazepam HCl) is relatively safe and well tolerated; morning "hang-over" has been infrequent. The usual adult dosage is 30 mg; in elderly or debilitated patients, limit initial dosage to 15 mg to preclude over-sedation, dizziness or ataxia. Caution patients about possible combined effects with alcohol and other CNS depressants.

Broad-spectrum medication for the most common forms of insomnia

Awake too early



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One 30-mg capsule *h.s.*— usual adult dosage
(15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.

- ☐ induces sleep rapidly
- ☐ reduces nighttime awakenings
- ☐ lengthens total sleep time

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Please see following page for a summary of complete product information.

Broad-spectrum medication for the most common forms of insomnia

Dalmane®
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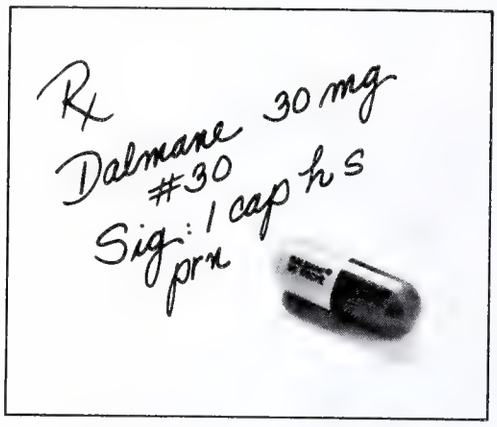

Objectively proved in the sleep research laboratory, Dalmane

- □ induces sleep within 17 minutes, on average
- □ reduces nighttime awakenings
- □ provides 7 to 8 hours sleep, on average, without repeating dosage

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum benefi effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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4. Dement WC: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

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Annual Session: more than a century of progress

A presentation of the Cherokee alphabet . . . use of the cocklebur as an antidote for snakebite . . . the growing popularity of hypodermic medication . . . the need for a state university with an adequate medical department . . . These were some of the topics of discussion at the 1876 annual session of the Texas Medical Association. What a difference 100 years makes! If a physician from 1876 were to visit this year's May 6-9 session in Dallas, he would be astonished, bewildered, surprised, and a bit confused . . . to say the least.

Scientific Activities

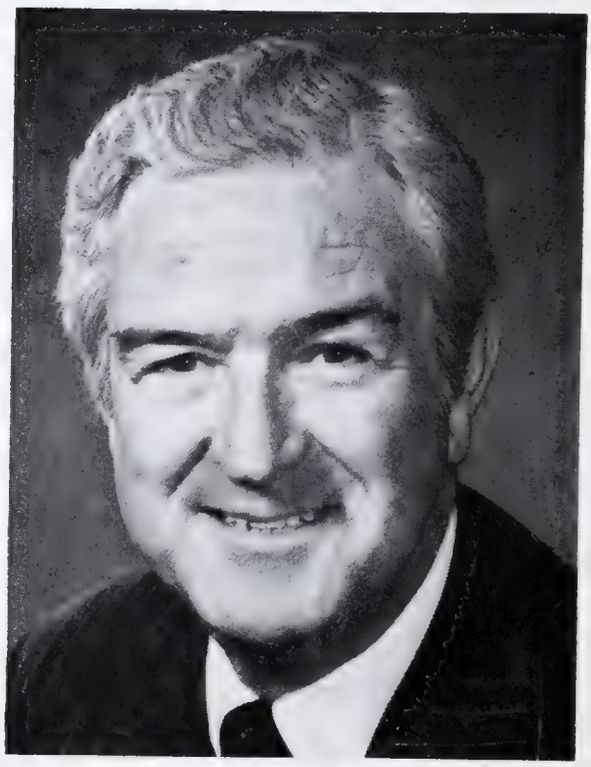
Fifty-two prominent medical leaders have been secured for the 1976 Annual Session.They will be complemented by some 300 TMA members who will participate in the scientific program, along with 100 special essayists who include researchers, therapists, attorneys, and other professional representatives.

Featured speakers for the general meeting luncheons to be held May 6, 7, and 8 will be, respectively, Dr. Max H. Parrott, president of the American Medical Association; Ann Landers, nationally syndicated newspaper columnist, and former Governor of Texas John B. Connally.

The format for the Dallas convention calls for heavy days of scientific programming on Thursday, Friday, and Saturday. Twenty sections, eight committees, and 36 specialty and related medical societies will be

Downtown Dallas makes an impressive skyline view. Annual Session activities will be based in the heart of the city.

Ann Landers, syndicated columnist, will address the May 7 general meeting luncheon. Her topic will be "Dear Doctor: Ann Landers Has a Problem."



Former Governor John B. Connally will be the featured guest speaker at the May 8 general meeting luncheon.

conducting business and scientific meetings.

Four significant special features—a cardiopulmonary resuscitation training program, AMA-TMA postgraduate courses, live teaching demonstrations, and a postgraduate course on high risk pregnancy and perinatal medicine—will provide added highlights for scientific aspects of the Annual Session.

The cardiopulmonary resuscitation training program will provide instruction in basic life support and various aspects of advance life support.Faculty members will discuss basic life support, endotracheal intubation and airway adjuncts, arrhythmia recognition and defibrillation, and drugs used in CPR. The program will be presented May 7 and will be limited to 60 persons. If response indicates, a second course will be offered on May 8. Attending physicians will receive AMA Category I credit, along with certification that they have participated in a four-hour CPR course.

The course will be directed by Dr. Albert E. Raizner, of Houston and will be sponsored jointly by the Texas Medical Association; the American Heart Association, Texas Affiliate; and the Baylor Heart and Blood Vessel Research and Demonstration Center. Emphasis will be placed on small group and individualized instruction.The registration fee for the course is $40.

Spurred by the success of postgraduate courses which were presented in San Antonio in 1975, the Council on Annual Session again requested the AMA to assist in offering six courses during the Dallas meeting. The classes will be presented starting at 8 am May 9 in order to avoid conflict with the established features of the Annual Session. The topics for the courses are basic electrocardiography; dermatology for non-dermatologists; acid-base, fluid, and electrolyte balance; office gynecology; antibiotics—the proper selection; and life saving measures for the critically injured. The courses will be directed by physicians associated with The University of Texas Southwestern Medical School and Scott and White Clinic. Each course will be five hours in duration.

Physicians will be provided with a syllabus for home study. Registrants are eligible for Category I credit toward the AMA Physician's Recognition Award and elective credit for family physicians. The fee for each course is $55. The AMA will prepare the syllabuses, receive the registration fees, and provide personnel to administer the program.

Live teaching demonstrations also proved to be a popular feature when first presented in San Antonio in 1975. The presentations will be offered at 9 am, 11 am, 2 pm, and 4 pm on May 6 and 7 and at the first three times on May 8. The demonstrations cover clinical problems for practicing physicians. They will be presented by recognized authorities utilizing patients, models, or video-taped profiles.

The postgraduate course on high-risk pregnancy and perinatal medicine will be presented on May 7 under the sponsorship of TMA's Sections on Pediatrics and on Obstetrics and Gynecology, and under the direction of Dr. Charles R. Rosenfeld of Dallas. The course will carry six hours of AMA Category I credit.

Regular features return

Once again, the Curbstone Consultations will be held to provide a forum for informal discussion of subjects concerned with the broad aspects of medicine. This year's discussions are scheduled for May 7 from 5-6 pm and May 8 from 4:30-5:30 pm. Complimentary beer, coffee, and soft drinks will be served.

Plans for 13 Continental Breakfast presentations have been finalized for the

mornings of May 7 and 8. Programs feature 15 minutes of informal discussion and refreshments followed by 10-15 minutes of remarks from speakers and a question and answer period. The 13 selected topics cover a broad range of medical problems including hyperglycemia, breast carcinoma, antibiotics, skeletal imaging, glaucoma, chronic pain, and rheumatoid arthritis.

Exhibits

Always an interesting attraction for physicians and guests alike, 160 scientific and technical exhibits will be on display during the Annual Session in the ballrooms of the Fairmont Hotel. In addition, the Ninth Annual Physicians and Spouses Art Exhibition will be located on the lobby level of the Fairmont. The exhibit will include such works as paintings, sculpture, photography, and arts and crafts.

Just for the fun of it

Golf and tennis tournaments are planned to begin on May 5. Both events will be held at the Royal Oaks Country Club, located approximately 15 minutes from downtown Dallas. A skeet and trap tournament also is planned May 5 at the Dallas Gun Club. Sports activities information may be obtained from Dr. Phillip E. Williams, Jr., of Dallas. Dr. Williams is also arranging for a block of tickets at attractive prices for the Byron Nelson Golf Classic in Dallas May 9.
Reserve Saturday night for cocktails, buffet dinner, and dancing with TMA. Party proceeds go to the Student Loan Fund of the Woman's Auxiliary. The party will begin at 7 pm at the Statler Hilton Hotel. Mal Fitch and his orchestra will provide the music for the evening. Tickets are set at $20 per person.
Other entertainment activities are being planned by various fraternity and alumni groups.

And Dallas, too

And if Annual Session activities leave anyone a spare moment, there's the bustling metropolis of Dallas to explore. Headquarters hotels—Fairmont Hotel for scientific sessions and exhibits, Statler Hilton Hotel for business meetings, and the Sheraton-Dallas Hotel for auxiliary meetings and scientific sessions—are conveniently located in downtown Dallas. The list of Dallas' attractions go on and on. To name just a few, there are theater centers, dinner theaters, many fine restaurants, night clubs with name entertainment, museums and permanent exhibits, recreational facilities, sports facilities, and medical and research centers.
You won't want to miss this convention. Planners have gone all out to make the Bicentennial Annual Session an event to remember. Pre-registration and housing forms may be found on p 107.
See you in May in "The Time of Your Life City."

Things to do and see in Dallas

Theaters

Dallas Theater Center, 3636 Turtle Creek. The primary showcase for the dramatic productions of the Dallas Theater Center is the 416-seat Kalita Humphreys Theater. Tours available.

Country Dinner Playhouse, 11829 Abrams Road and LBJ Freeway.

Six Flags Over Texas is just one of the many attractions for visitors in the Dallas area.

Crystal Palace Dinner Theatre, 6532 E Northwest Highway.

Granny's Dinner Playhouse, 12205 Coit Road.

Windmill Dinner Theater, 4811 Keller Springs Rd.

Theater Three, 2800 Routh St. Located in "The Quadrangle," Theater Three is Dallas' resident arena theater.

Amusements/Attractions

Lion Country Safari, Dallas-Fort Worth Turnpike at Belt Line Road. An open-space animal exhibit featuring African wildlife.

Six Flags Over Texas, Dallas-Fort Worth Turnpike. World-famous amusement park. Open on weekends only through late May.

Dallas Zoo, Marsalis Park. Contains 50 acres with an average of 2,000 mammals, birds, reptiles, and amphibians. Open daily.

Mesquite Championship Rodeo, Hickory Tree Road, Mesquite. Every Friday and Saturday Night April through September.

State Fair Park, 2 miles east of downtown. Includes The Age of Steam, Aquarium, The Garden Center, Health and Science Museum and Planetarium, Museum of Natural History, Dallas Museum of Fine Arts, Texas Hall of State, Wax World, and Texas Sports Hall of Fame.

John F. Kennedy Memorial Plaza, Main, Commerce, Record, and Market Streets.

Shopping

NorthPark, North Central Expressway at Northwest Highway, Exits 15 & 16. Over 135 individual stores in climate controlled malls.

The Olla Podrida, Coit Road, Exit 20 off N Central Expressway. Located in an old barn, The Olla Podrida contains an array of small artists shops featuring paintings, photographs, weaving, pottery, brass, greenery, leather, jewelry.

The Quadrangle, 2800 Routh St. Over 50 different shops and restaurants. The array of specialty shops and boutiques offer Indian crafts, antiques, crystal, fine linens, toys, books, fabrics, jewelry, works of art, flowers, and sporting goods.

Carillon Plaza, Preston Rd at Alpha Rd. Restaurants and shops including antiques, accessories, books, furniture, clothing and other items.

Restaurants

Bagatelle, Greenville Ave at University. French country style atmosphere.

Blooms, 2917 Fairmont. Continental entrees.

Chablis, Quadrangle. French specialties.

China Inn, 6521 E Northwest Highway. At the forefront of the Oriental restaurant scene.

Enclave, 8325 Walnut Hill. Widely varied continental menu.

Ewald's, 5415 W Lovers Lane. Noted for fine veal dishes.

Mario's, 135 Turtle Creek Village. Italian specialties.

Mr. Peppe, 5617 W Lovers Lane. French cuisine.

Oporto Oyster Bar, 2929 N Henderson. Seafood.

Oz, 5469 LBJ Freeway. Outstanding restaurant and club. Staff with international credentials.

Pyramid Room, Fairmont Hotel. Truly gourmet restaurant.

The Quadrangle is a unique assemblage of over 30 specialty shops, art and antique galleries, and gourmet restaurants located only a few blocks from downtown.

A giant plaster model of a human ear is one of the many intriguing exhibits on display at the Dallas Health and Science Museum and Planetarium in Fair Park.

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LEGAL PROTECTION: FACTS YOU SHOULD KNOW

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SUPREME COURT UPHOLDS CONVICTION OF PHYSICIAN AS 'DRUG PUSHER'

In December, 1975, the U S Supreme Court upheld the conviction of a Washington, D C physician who had been convicted of violating federal drug control laws. The Court held in *United States vs Moore* that the conviction of the physician on 22 counts of violating federal drug control laws with a maximum sentence of up to 45 years and fines of $15,000 should be upheld.

The Court distinguished between the penalties which may be imposed against a physician for violation of the Controlled Substances Act and those penalties which apply to those convicted of the significantly greater offense of acting as a "drug pusher."

In this case, the physician indiscriminately prescribed methadone following a most "perfunctory examination . . . and an unsupervised urinalysis (the results of which were regularly ignored)."

The Court noted that prescriptions were written based upon the request of the patient and not medical indication. The physician charged the patient for the amount of the pills prescribed, not for the medical service rendered.

The physician argued that the lesser penalties provided under the Controlled Substances Act applied to him since he was a registrant and the prescriptions were made in the practice of medicine.

The Court rejected this argument and noted that the protection of the registrant is waived when he fails to act as a physician. The Court held:

> Implicit in the registration of a physician is the understanding that he is authorized to act "as a physician."

The lessons of this case should be clear to all practicing physicians. The license to practice medicine is not a license to prescribe indiscriminately. There must be a medical necessity and a therapeutic need for the drug prescribed.

The Texas Medical Practice Act also provides that a physician may have his license revoked for unprofessional or dishonorable conduct if he prescribes or administers a drug or treatment which is non-therapeutic in nature or non-therapeutic in the manner such drug or treatment is prescribed.

The *Moore* decision puts physicians on notice that the desire of a patient to secure a drug or the need for a drug to "stay awake to drive a truck" or "stay awake to gamble" does not constitute a therapeutic need for the prescription. A physician prescribing for such reasons or merely at the request of the patient may subject his license to cancellation by the State Board of Medical Examiners and his federal and state Controlled Substances Registration to cancellation or restriction.

MEDICINE AND THE LAW

NEGLIGENT MISREPRESENTATION

In the following case,[1] "negligent misrepresentation" was recognized as a cause of action against a treating physician who allegedly negligently failed to diagnose the physical condition of the patient. Relying upon advice from the physician, the patient settled a personal injury claim against another person for substantially less than his true damages.

Facts

The patient brought an action to recover against a treating physician on the theory that the physician negligently diagnosed the patient's physical condition and misrepresented the extent of his injuries. This information caused the patient to settle his claim for damages against an automobile insurance carrier for a lesser sum than he would have settled for otherwise.

The plaintiff had been involved in an automobile collision in 1962 which resulted in injuries to his cervical spine. He was treated by the defendant doctor and apparently recovered. He had been periodically treated by the defendant physician until 1969. In the latter part of 1969, the plaintiff was involved in another collision which caused injuries to his cervical spine and discomfort and aching in the neck, shoulders, thumbs, and other portions of the body. The plaintiff was examined by the defendant physician who diagnosed muscle tightness in the upper right and left trapezius muscles. There was some limitation of motion due to the discomfort in the cervical spine. A few days after the examination, the plaintiff telephoned the defendant physician to tell him that an insurance carrier representative for the driver of the other car was attempting to negotiate a settlement. He inquired as to whether or not it would be a proper time to make a settlement. The defendant physician allegedly stated to the plaintiff that his injuries were substantially the same as he had received before and that he could expect to make a complete recovery from it. Therefore, it would be a good idea to go ahead and settle. Based upon this alleged representation, the plaintiff settled with the insurance carrier.

The plaintiff alleged that shortly after he settled the claim, his condition began to deteriorate and has continued to deteriorate. The plaintiff alleged that he had been hospitalized, had several surgeries, and was still receiving treatment in an effort to alleviate his condition. The plaintiff stated he was unable to sleep or rest adequately. He stated he had suffered extreme and unendurable physical pain and mental suffering. The plaintiff alleged that he had lost approximately $2,500 per month from his business, and that he would continue to lose time from his business in the future because of his injuries. The plaintiff also alleged that he had incurred $41,621.68 in medical bills and would have future medical bills in the sum of at least $20,000. The plaintiff stated that had the defendant physician not negligently advised him to settle his case, he would have not settled until the true nature and extent of his injury was known. He could then have collected his true damages from the driver of the other vehicle. For this reason, the plaintiff stated that he is entitled to recover from the defendant physician the damages he would have recovered from the third party. The plaintiff asked for a judgment from the defendant in the sum of $261,621.68.

The trial court had previously sustained a special exception to the effect that the original petition failed to state a cause of

action and dismissed the suit. The Court of Civil Appeals reversed the trial court and ordered the case to be tried.

Discussion

The plaintiff contended that he had stated a cause of action commonly known as "negligent misrepresentation." The court said that most jurisdictions, and particularly the more modern decisions, have recognized a cause of action on negligent misrepresentation. In Texas the court stated it constituted a specie of remedial fraud.

Section 552 under Topic 3 of *The Restatement of Torts, Second Edition, 1966* states that "one who, in the course of his business, profession or employment, or in a transaction in which he has a pecuniary interest, supplies false information for the guidance of others in their business transactions, is subject to liability for pecuniary loss caused them by their justifiable reliance upon the information, if he fails to exercise reasonable care or competence in obtaining or communicating the information." The court stated that liability is limited in this type of case to the loss suffered (a) by the person or one of the persons for whose benefit and guidance he intends to supply the information, or knows that the recipient intends to supply it; and (b) through reliance upon it in a transaction which he intends the information to influence, or knows the recipient so intends or in a substantially similar transaction. The court further stated that intent is not an element and need not be pled.

The court pointed out that the same theory had been applied to abstractors of title, accountants, surveyors, inspectors of goods, and others.

The court stated that in this particular case, the plaintiff's pleadings assumed to be true, the theory shows that the defendant, in the course of his profession, supplied false information to the plaintiff for the plaintiff's guidance in his business transactions; that the defendant failed to exercise reasonable care in several particulars in the gathering of the information; that the plaintiff relied on the information in a transaction the defendant intended it to influence; and that the plaintiff thereby suffered pecuniary loss. The court stated that these pleadings do state a cause of action on negligent misrepresentation, and a proper measure of damages.

Conclusion

As is true in this particular case, the majority of medical malpractice cases are tried on a negligence theory. A cause of action for negligence in medical malpractice action does not differ basically from the usual tort action insofar as its elements are concerned. The elements include the following: (1) the existence of a duty of care on the part of the physician; (2) negligent breach of that duty; (3) resulting injury to the plaintiff (sometimes referred to as proximate cause); and (4) damages. The duty owed by the physician to his patient arises when the patient-physician relationship is established. There is, however, a presumption that the physician has discharged his full duty. To defeat this presumption, affirmative proof of a breach of the duty coupled with affirmative proof that the breach results in injury is required. As is true of negligent actions generally, the breach of duty may consist of an act of omission or commission. The physician may fail to do what a doctor in the exercise of ordinary care would have done or would not have done toward his patient.

This theory of "negligent misrepresentation" would dictate to the prudent physician that he or she should exercise caution in advising patients on the settlement of a cause of action. This case points out that wherein the facts warrant, the courts will hold physicians liable for failure to diagnose coupled with communication of such information and reliance upon the same to the damage of the patient.

TMA Office of General Counsel
Ace Pickens

[1]*Rosenthal vs Blum,* 529 SW2d 102 (Tex.Civ.App. 1975).

Medicine in literature

BREAKING THE CHAIN OF CROSS INFECTION, (motion picture), American College of Surgeons, Surgical Film Library, Davis and Geck Distributors, 1973, 17 min, sd, color.

Certain policies and procedures must be instituted in order to prevent the transmission of infection by patients and hospital staff. This film presents the patient-centered activities of various nursing units and in the operating room to demonstrate effective methods of contamination control.

ANEURYSMAL DISEASE, slide presentation, Medcom, 1973, 100 color slides, 2x2.

Discusses the classification, pathogenesis, diagnosis, and surgical correction of true and false aneurysms. Accompanying monogram.

AORTO-ILIAC AND PERIPHERAL OCCLUSIVE DISEASE, slide presentation, Medcom, 1973, 100 color slides, 2x2.

Clinical and radiologic presentation and surgical correction of these two main areas of the atherosclerotic involvement. Accompanying monogram.

LID SURGERY, PART I (LID PLASTICS), slide presentation, Medcom, 1973, 100 color slides, 2x2.

Presents the common lid plastic procedures encountered in ophthalmologic practices; covers trauma, ptosis, blepharochalasis entropion and ectropion. Accompanying monogram.

LID SURGERY, PART II (MANAGEMENT OF LID TUMORS), slide presentation, Medcom, 1973, 100 color slides, 2x2.

Describes the diagnosis and surgical treatment of common lid tumors with emphasis on basal cell carcinoma. Accompanying monogram.

IN THE TMA LIBRARY

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Medical Newsmakers

WILLIAM A. WEBB, EdD, Austin, has been named Acting Commissioner of Higher Education for Texas. In the position, Dr. Webb serves as the chief executive officer of the Coordinating Board staff, pending appointment of a commissioner. Dr. Webb previously served as head of the Division of Financial Planning for the Coordinating Board, Texas College and University System.

Two Texans have been appointed to committees of the American Medical Association. DR. HADEN E. McKAY, Humble, has been named to the Ad Hoc Committee on Medical Discipline. The Committee will study the disciplinary mechanisms of medical associations and determine the effectiveness of medical discipline; recommend appropriate modifications in medical self-regulation and appropriate legislation and governmental regulations; recommend improvements in state legislation and licensure board regulations; review the procedures by which hospitals limit privileges within the individual physician's competence; and study the relationship between medical discipline and malpractice claims. DR. MICHAEL DeBAKEY, Houston, has been appointed to the National Commission on the Cost of Medical Care. The goal of this commission is to appraise all factors leading to rising expenditures and to review optional courses for public and AMA policy in coping with increased costs. The commission will also explore the operational aspects of the health care delivery system and will facilitate nationwide discussion and dissemination of the facts and issues regarding health care costs.

DR. JOSEPH M. MERRILL, executive vice president, Baylor College of Medicine, Houston, has been granted a one-year sabbatical to study and research new approaches in medical education and administration. The sabbatical will begin June 5, 1976. Dr. Merrill will spend a few months in Washington, DC to thoroughly analyze the U S government's role in medical education and health care delivery. He also plans to visit several European countries to learn about their medical training and health services.

The Titus Harris Society recently honored DR. HAMILTON FORD, Galveston, for his outstanding leadership in the field of psychiatry. Dr. Ford is past chairman of the Department of Psychiatry, The University of Texas Medical Branch. The recognition came during a special Honors Convocation Feb 20 at the Galveston Moody Center.

DR. EDWARD R. JOHNSON, assistant professor of anesthesiology at The University of Texas Southwestern Medical School at Dallas and director of clinical anesthesiology at Parkland Memorial Hospital, has taken additional duties as assistant dean for student affairs at the medical school. Dr. Johnson will share administrative and student responsibilities handled by the Student Affairs Office, including work with admissions, internship advising, as summer jobs for students, senior electives, and freshman orientation.

"You're in pretty fair shape for someone who wears 24 different medical alert bracelets."

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

S.A. Alexander
Dallas, 1912-1975

R.E. Campbell
Fort Worth, 1916-1975

W.E. Carswell
Dallas, 1901-1975

W.H. Heck
San Antonio, 1897-1975

R. T. Long
Dallas, 1920-1975

J.A. Neely
Bellville, 1888-1975

J.W. O'Donnell
Alpine, 1909-1975

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. Campbell

Dr. Carswell

Dr. S. A. Alexander

Dr. Samuel Anthony Alexander, 63, of Dallas, died Dec 11, 1975. Cause of death was a heart attack.

Dr. Alexander was a member of Baylor University Medical Center staff and St. Paul Hospital honorary staff.

The obstetrician-gynecologist was graduated from Baylor University and The University of Texas Medical Branch. His internship was at St. Paul Hospital (1936-37).

Dr. Alexander's professional memberships included the Dallas County Medical Society, Texas Association of Obstetricians and Gynecologists, Dallas-Fort Worth Obstetrical and Gynecological Society, American College of Obstetrics and Gynecology, and Dallas Southern Clinical Society.

He was a veteran of World War II, having served in North Africa and Italy.

Survivors include his wife, Evelyn Prince Alexander; two daughters, Elizabeth Alexander and Mrs. Eddie Clark, all of Dallas; brother, Anthony Alesandra of Waco, and sister, Mrs. Kermit Lewis of Houston.

Dr. R. E. Campbell

Dr. Ralph Elliott Campbell, director of the Trinity Valley Mental Health-Mental Retardation Authority's mental health clinics, Fort Worth, died Nov 20, 1975, at the age of 60.

Dr. Campbell, a native of Fort Worth, was a graduate of The University of Texas (1940) and The University of Texas Medical Branch (1943). His internship in psychiatry was at the Fort Worth City-County Hospital. He served residencies at Beverly Hills Hospital, Dallas; Columbus State Hospital, Columbus, Ohio; and the Medical College of Virginia, Richmond.

The physician served 22 years in the US Army. He received the Purple Heart and the Silver Star during World War II. Additionally, he served two tours in the Korean War. He was a member of the All Army Pistol Team during 1956-59, and was a certified pistol instructor.

Dr. Campbell's professional memberships included the Tarrant County Medical Society, American Medical Association, and the American Psychiatric Association. He was also a life member of the National Rifle Association (competing in the Master class), a past president of the Dallas Gun Collectors Association, and a member of the Texas Southwestern Cattle Raisers Association.

Surviving are his wife, Bonita Heacock Campbell; and two daughters, Polly Ruth Campbell and Linda Sue Campbell, all of Fort Worth.

Dr. W. E. Carswell

Dr. Winston Elton Carswell, 75, died Dec 5, 1975. He was a resident of Dallas.

Dr. Carswell retired in 1972, after having practiced in Dallas for 40 years.

A native of Georgiana, Ala, he received his undergraduate education at Southern Methodist University and was graduated from Baylor College of Medicine (1929).

He was an intern at Georgia Baptist Hospital, Atlanta, and he was a resident surgeon at Polyclinic Hospital, New York.

Dr. Carswell's professional memberships included Dallas County Medical Society, Southern Medical Association, American Academy of Family Physicians and Dallas Southern Clinical Society. He was an honorary member of TMA and the AMA. He also was a 32nd degree Mason.

Surviving the surgeon are his wife, Mary Magill Carswell; daughter, Mrs. Jane Gottwald; and granddaughter, Laurie Gottwald, all of Dallas.

Dr. W. H. Heck

Dr. William Howard Heck, San Antonio, died Dec 7, 1975. He was 78 years of age.
Dr. Heck, a native of Giddings, Tex, was graduated from The University of Texas and The University of Texas Medical Branch (1923). His internship was at Robert B. Green Memorial Hospital, San Antonio. He practiced in San Antonio from 1924 until his retirement in 1972.
The physician was a former member of the US Army (1942-45). He was a past president of the Bexar County Medical Society and an honorary member of the Texas Medical Association. He also was a member of the American Medical Association.
Surviving Dr. Heck are two daughters, Mrs. Robert O'Brien, Rhinelander, Wis, and Mrs. Leonard Aschenbrener, Quincy, Ill; two sisters, Mrs. C. H. Redkey, San Antonio, and Mrs. W. V. Dungan, Rosenberg; and seven grandchildren.

Dr. R. T. Long

Dr. Robert Thomas Long, clinical professor of psychiatry at UT Southwestern Medical School, Dallas, died Dec 4, 1975. Cause of death was a heart attack.
A specialist in adult and child psychoanalysis, he was formerly executive director of the Harvard Training Program in Child Psychiatry, and principal psychiatrist at the Massachusetts Mental Health Center and director of the center's adolescent unit.
Dr. Long was a native of Youngstown, Ohio. He was graduated from the University of Michigan, Ann Arbor, and Columbia University College of Physicians and Surgeons, New York. Upon completion of his internship in Pittsburgh, Dr. Long took his residency in psychiatry at Boston State Hospital and his residency in child psychiatry at Massachusetts General Hospital, Boston. He received his training in both adult and child analysis at the Boston Psychoanalytic Institute.
He was a past president of the Dallas Neuropsychiatric Society, past secretary of the American Academy of Child Psychiatry, and past secretary of the New Orleans Psychoanalytic Institute.
Additionally, he was a member of the American Medical Association, American Psychiatric Association, American Psychoanalytic Association, American Academy of Child Psychiatry, the American Association for Child Psychoanalysis, and the International Psycho-Analytical Association. Dr. Long also was an examiner for the American Board of Psychiatry and Neurology.
Survivors include his wife, Victoria Drombosky Long, Dallas; sons, Robert Anson Long, Elvin Michael Long, and James Andrew Long, all of Austin; daughter, Mrs. Margaret Kelley of Vancouver, BC; brother, Thomas F. Long of Dallas; two sisters, Mrs. Margaret Stevens of Dallas, and Mrs. Grace Jaasund of Glen Rock, Pa; and two grandchildren.

Dr. Long

Dr. Neely

Dr. J. A. Neely

Dr. Jubal Allen Neely, 87, an honorary member of the Texas Medical Association, died Dec 14, 1975. He was a resident of Bellville.
Dr. Neely, who retired in 1972, began his practice as a family physician and later specialized in otolaryngology. He was one of the founders of the first hospital in Bellville.
In 1912, the physician was graduated from The University of Texas Medical Branch, Galveston. His undergraduate education was at North Texas State University.
He was a past president of the Austin-Grimes-Waller County Medical Society, as

Dr. O'Donnell

well as a member of the American Medical Association.

He also was a member of the Masonic Lodge and the Shriners for over 50 years. He was an active member of the Boy Scouts of America, and received the Silver Award in 1953. Additionally, Dr. Neely had served as a member and president of the Bellville School Board, the Chamber of Commerce, and numerous other civic organizations.

Surviving Dr. Neely are his wife, Almeda Fordtran Neely, and two sons, Drs. R. A. Neely and Winston B. Neely, all of Bellville; brother, Dr. Paul Neely, of Portland, Ore; four grandchildren, two of whom are physicians, and one great-grandchild.

Dr. J. W. O'Donnell

Dr. John William O'Donnell, 66, of Alpine, died Dec 11, 1975, apparently of a heart attack. He was a past chief of staff at Big Bend Memorial Hospital in Alpine.

Dr. O'Donnell was born in Buhl, Minn. He was a 1931 graduate of the University of Minnesota College of Medicine. He served internships at Minneapolis General Hospital and Murray Clinic Hospital, Butte, Mont.

The general practitioner was a member of the US Army from 1934 to 1947. He served at Brooke Army Medical Center, San Antonio, and in Honolulu. He was executive officer of the Army hospital at Van Nuys, Calif, during World War II. He retired from the service with the rank of colonel.

He was a member of the Big Bend Medical Society and the American Medical Association.

Surviving Dr. O'Donnell are his wife; a daughter, Sister Pat O'Donnell, Port Arthur; two sons, John O'Donnell, Richardson, and Bill Green, Woodbridge, Va; three sisters; five brothers; and 12 grandchildren.

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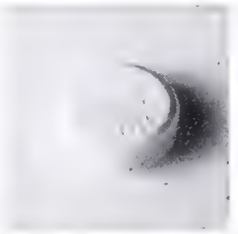

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severely depressed, or with latent
ion, or with suicidal tendencies.

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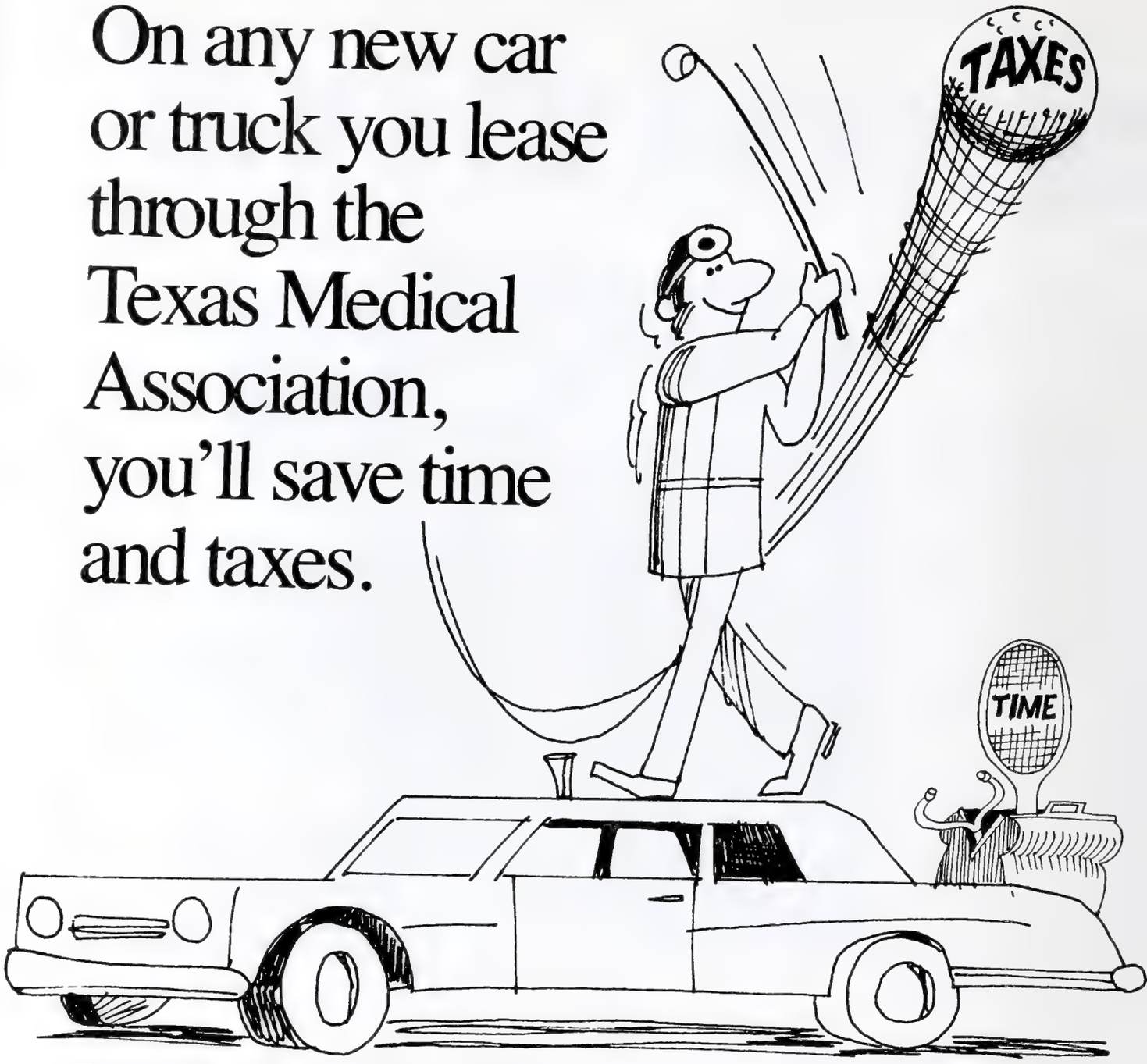

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*First Health and Nutrition Examination Survey, DHEW Pub. No. (HRA) 74-1219-1, National Center for Health Statistics, Rockville, Maryland. (This report indicates that approximately 95% of the children 1-5 years old had iron intakes *below* the standard set by the Food and Nutrition Board of the National Academy of Sciences.)

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Breast self-examination:

KEY ROLE OF THE PHYSICIAN

item:	**Breast cancer is a major concern of American women, according to a recent Gallup study conducted for the American Cancer Society.**
item:	**Although aware that early discovery improves the chances of cure, and that BSE can lead to early discovery, *fewer than 1 in 5* women practice BSE, and *only half* have an annual breast examination by a physician.**
item:	**Only 35% of all women polled reported that a *physician* had ever raised the subject of breast self-examination, and only 24% had received instruction from the physician on how to do it. Even among women who regularly see a gynecologist, only 34% had been instructed on BSE.**
item:	***But,* among women who received personal instruction from their physicians, the overwhelming majority *(92%)* practiced BSE during the preceding year.**

The Gallup study revealed that, far more important than increasing awareness of breast self-examination, is the problem of inducing women to practice it regularly. The physician plays a key role in this—by teaching women the correct technique, and instilling in them the confidence that will assure their continued practice of BSE.

The American Cancer Society gives major emphasis to breast cancer through research and a vast array of public educational materials, designed to give women life-saving information about the disease. Our latest approach is via a pioneering television film starring Jennifer O'Neill, "Breast Cancer: Where We Are." Where we *will* be in a few years will certainly hinge on our joint efforts.

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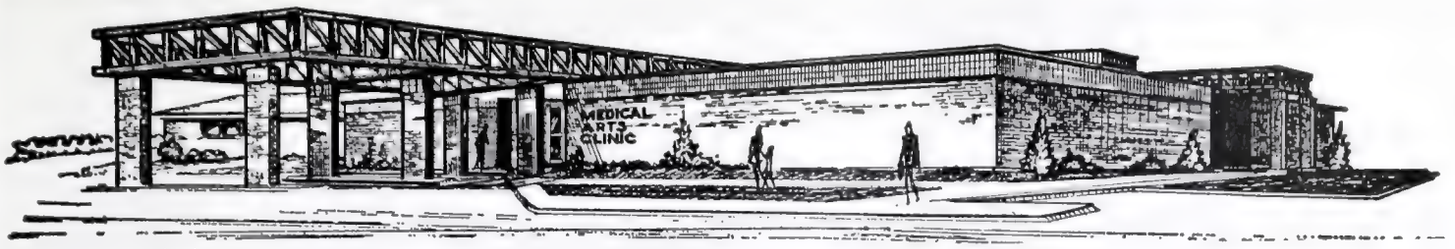

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3205 West Davis Street, Conroe, Texas 77301

EUGENE R. TODD, M.D., P.A.
Diplomate of the American Board of Urology
Fellow of the American College of Surgeons
Fellow of the Society for Pediatric Urology
Urology—Adult and Pediatric

3434 Swiss Ave., Suite 406, Dallas, Tex. 75204, 214 826-3500

DALLAS UROLOGY ASSOCIATES
David D. Reisman, M.D.
Donald J. Logan, M.D.
Allen S. Plotkin, M.D.
Donald L. McKay, M.D.
Practice Limited to Urology

Medical City Dallas, 7777 Forest Lane, Suite 230, Dallas, Texas 75230
Telephone: 214 233-7765 Answered 24 Hours

DIRECTORY RATES & DATA: Space is available to TMA members at $12.50 per column inch per month and listings must run for a minimum of six months. A discount of 5% is allowed for six months' advance payment. Section headings are limited to those specialties designated by the American Medical Association. A list of these specialties is available upon request. New listings, changes, or cancellations should be sent to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701. Deadline is the 5th of the month preceding publication month.

Classified Advertising

Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. Preston McCall at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

FP OR IM TO JOIN THREE MAN GROUP. Investigate facilities, compatibility, economics and environment personally with wife and family. Community Health Center, P.O. Box 672, Trinity, Texas. 713-594-3595 for Barnes, Colwell or Cook.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start for salary of $45,000 per year negotiable. City has population of 6,000 with trade area of 20,000 to 25,000. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79710; telephone 915-267-6361.

LOCUM TENENS WANTED: Doctor interested in GP work with OB. To cover one doctor on weekly, monthly or any time of the year basis. Financial arrangement negotiable. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

PHYSICIANS WANTED—Progressive East Texas community of 15,000 with 100 bed accredited hospital. Located in lake resort area. Varied recreational opportunities. Group or solo opportunities available. Medical community will assist in establishing practice. Please contact Joe Ed Smith, M.D., 503 Bryson, Athens, Texas 75751; 214-675-2216.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PATHOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: RADIOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: GP OR PEDI. Potentially, lucrative practice, suburban area of about 20,000. No Pedi in area. Willing to negotiate. Paul A. Grandy, M.D., 10805 N. Lamar Blvd., Austin, Texas 78753; 512-837-2640.

PHYSICIANS WANTED—Progressive gulf coast community of over 12,000 with new 56 bed accredited hospital, an hours drive south of Houston metropolitan facilities. Good schools, excellent beach and other varied recreational opportunities close by. Contact: James Perry, Administrator, Angleton-Danbury General Hospital, 132 Hospital Drive, Angleton, Texas 77515; 713-849-7721.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

GENERAL INTERNIST WANTED: Board certified or eligible to join expanding successful group. Busy hospital and office practice. Houston environs. Excellent salary and fringe benefits. Contact Doctors Clinic, 1501 Broadway, Galveston, Texas; attention Robert Walsh, Administrator.

IMMEDIATE NEED OF GP, FP OR INTERNIST for 4 member clinic, part time surgeon group. Major hospitals. $2,500 monthly/vs percentage. Association possible. 5th member residency bound. Two months vacation/study. Call one weekend monthly, one night weekly. Limit your practice. Fort Worth. 1-817-534-6616.

PATHOLOGIST—part time—excellent opportunity for semi-retired, female, sports person. Current assistant of two years going into full time practice. 190 bed general hospital. Very congenial practice in suburban-rural community. Live anywhere in Dallas-Fort Worth metroplex. Salary adequate for good living! Arthur L. Raines, M.D., P.O. Box 686, Cleburne, Texas 76031. 817-645-9181, ext. 360.

WANTED: GP or FP for medical type practice with no obstetrics or surgery in multi-specialty group in beautiful Tyler, the medical center of East Texas. Two large hospitals with 600 beds adjacent to clinic. Excellent medical climate with all specialties represented in county society. Pension plan. Salary one year, then stockholder. Contact Carroll McCrary, Administrator, Medical & Surgical Clinic, P.A., 110 South Beckham St., Tyler, Texas 75701.

TEXAS PRACTICES. Have requests for associates from Texas physicians and some solo and group openings. Small, medium and large size cities. Excellent economic climate produces rapid practice growth. Please send C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Kingwood, Texas 77339.

DOCTOR WANTED FOR GENERAL PRACTICE in Poteet, Texas. 28 miles south of San Antonio, Texas. New furnished clinic for two doctors. Free rent for a limited time. Contact A. A. Hollub, 512-742-3315.

STUDENT HEALTH PHYSICIANS. Two physicians needed to help provide primary medical care for student population of 22,000. Stimulating environment, Medical School Ambulatory Clinic. Salary above $30,000; position includes clinical appointment in medical school. Call or write Reagan H. Gibbs, M.D., Texas Tech University Health Sciences Centers, Box 4049, Lubbock, Texas 79409; phone 806-742-3327.

PSYCHIATRY RESIDENCY AVAILABLE at Texas Research Institute of Mental Sciences, Houston, in the Texas Medical Center. Applicant must have internship or equivalent year of graduate medical education. First year stipend without service obligation, $15,000; or optional $19,000, with State career obligations. TRIMS features comprehensive programs in all facets of service, research, and training. Affiliated with local medical schools and other institutions. For information contact Ed Johnstone, M.D., Texas Research Institute of Mental Sciences, 1300 Moursund, Houston, Texas 77030.

MID-GULF COAST: INTERNIST with cardiology sub-specialty; family practitioner needed to practice in very progressive medium sized community on Gulf Coast. Excellent schools, churches with a friendly area population. New hospital with 60 beds under construction now. Excellent sports and recreation near by with hunting and salt and fresh water fishing. Plan guaranteed income for two years to acceptable people. Call 713-543-3367 or write P.O. Box 405, El Campo, Texas 77437.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING FAMILY PHYSICIAN: Group of eight doctors seeking family physician. $40,000 guaranteed annual income based on percentage of earnings collected. Please reply to Ad-626, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OCCUPATIONAL, AEROSPACE, PREVENTIVE MEDICINE. Board certified or eligible physician in occupational, preventive or aviation medicine for primary care practice in large, 60-man clinic and satellites with opportunity to participate in executive health, family practice, occupational medicine and prepaid health care program. Teaching and research opportunities in adjacent Texas Medical Center. Salary negotiable. (No dual compensation involved for retired.) Write or call Dr. M. B. Johnston, Kelsey-Seybold Clinic, 6624 Fannin Street, Houston, Texas 77030; telephone 713-797-1551.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER NEEDED for solo practice. 30 bed general hospital, Medicare approved. Quiet, rural town. Free office space provided. One other physician on active staff. Excellent public school system. Good hunting and fishing. Friendly people. Contact Administrator, Throckmorton County Memorial Hospital, P.O. Box 487, Throckmorton, Texas 76083; 817-849-2151 or 817-345-3206.

CAREER-ORIENTED ER PHYSICIANS wanted by ACEP-oriented Texas group. Flexible work schedules, competitive remuneration. Contact S. Powers, M.D., 2410 South Voss, Suite G116, Houston, Texas 77057; 713-790-1420. Ref. Ad. A.

WANTED: FAMILY PRACTITIONER, INTERNIST OR GENERAL SURGEON willing to do general practice to join the only two family practitioners in community and modern clinic. Recently completed community hospital. Located between Houston and San Antonio. Salary negotiable with training. Must see facilities and community to appreciate. Contact Drs. R. Cecil Marburger or C. I. Shult, 1220 Bowie, Columbus, Texas; 713-732-2318.

GENERAL INTERNISTS—Area physicians are actively seeking two general internists to practice in bedroom community of 80,000 in Northeast Dallas in affiliation with new full service 106-bed private hospital. Excellent fringe benefits, liberal salary guarantees, interview trip and relocation expenses are offered. Residents enjoy excellent recreational facilities, superior public schools, and a wide range of housing. Send detailed curriculum vitae to Ad-628, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE/GENERAL PRACTICE—Excellent private practice opportunity exists in Northeast Dallas bedroom community of 80,000 in affiliation with new full service 106-bed private hospital. Excellent fringe benefits, liberal salary guarantees, interview trip and relocation expenses are offered. Residents enjoy excellent recreational facilities, superior public schools, and a wide range of housing. Send detailed curriculum vitae to Ad-629, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PRIVATE PRACTICE OPPORTUNITY with guaranteed success now available in modern twenty-five bed, JCAH-approved private hospital and a new four-doctor clinic. Located in the heart of the Gulf Coast industrial center, twenty minutes from both downtown Houston, Texas and the Space Craft Center. Clinic furnishes all overhead including rent, supplies and personnel. To insure success, a guarantee of $3000 per month for six months is offered. Earnings limited only by personal desire as you maintain a private fee for service practice. For details, contact Floyd D. Pendergrass, Ph.D., Executive Director, Deaton Hospital, Inc., 208 North Main Street, Galena Park, Texas 77547. Phone or wire collect 713-672-6311.

DALLAS—INTERNAL MEDICINE OR FAMILY PRACTICE. Ideal opportunity. Doctor leaving practice, July 1976. In medical building of 25 doctors, no internist, only one in family practice. This is very busy practice, gross $200,000 last year. I will call you in confidence. Write to Ad-631, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

Situations Wanted

ANESTHESIOLOGIST 49, board certified with Texas license. Desiring Gulf location. Will be available in the summer of 1976. Please reply to Ad-606, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OB-GYN, 33, married, board certified, University trained, FLEX. Bilingual English-Spanish. Wish to relocate; seeks association or solo practice. Prefers south Texas, other areas considered. Will do FP to build up practice if needed. Available as soon as reciprocity licensing completed. Please reply to Ad-612, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST 46, university trained, certified. Two years NIH fellowships in cardiovascular radiology and one year fellowship in neuroradiology. Publications. Presently head of cardiovascular radiology section with an active echocardiographic section in a major north central teaching center. Seek challenging position in private practice, or teaching position. Ad-614, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MARRIED, AGE 37 YEARS. Immigrant visa. Finished three years of residency and one year clinical fellowship in anesthesiology. Have Texas and Georgia medical licenses. Would like to settle in Texas. Board eligible. Available immediately. Call 216-229-2200 ext. 2650 or write Avutu R. Reddy, M.D., Cleveland Clinic, Cleveland, Ohio 44106.

BOARD CERTIFIED, DYNAMIC, ECLECTIC, bi-lingual, 35 year old psychiatrist with ample experience in individual psychotherapy and institutional psychiatry and with excellent recommendations wishes to join partnership in the area of San Antonio, Texas. Please reply to Ad-616, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION: 35 year old, board eligible anesthesiologist looking for a place in Houston, Texas. No OB, please. For particulars, write to Ad-619, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGERY AND PEDIATRIC SURGERY. FMG, ECFMG and surgical board eligible. 34 years old, married. Want associate, group or guaranteed. Prefer close to middle or big size city. Please reply to Ad-620, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXPERIENCED BOARD CERTIFIED GENERAL SURGEON and wife board certified OB/GYN and certified cytologist looking for a permanent position in medium size or large city in Texas. Please reply to Ad-610, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST AND PEDIATRICIAN—Team of young husband (board eligible internal medicine and one year fellowship in cardiology) and wife (board eligible pediatrician) available for solo or group practice immediately. Call 201-333-6779 after 4 p.m.

BOARD CERTIFIED EXPERIENCED DIAGNOSTIC RADIOLOGIST with extensive experience in neuro-radiology, vascular procedures and special procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join hospital based group with private office. Available after three months time. Please reply to Ad-622, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, 33, board certified, with experience in trauma, leaving military in July 1976. Desires position in private practice in or near a metropolitan area in Texas. Please reply to Arthur Rosenthal, M.D., 469 Graham Road, Fort Sam Houston, Texas 78234.

BLUE-CHIP PHYSICIAN ASSISTANT looking for position in Austin or Hill Country area. Two years experience, including surgery. Baylor graduate 1973, Houston, Texas. Please reply to Ad-627, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST—45 year old, board certified AP-CP. Also board certified in OB/GYN. Experienced in clinical medicine as well as laboratory medicine and laboratory management. Desires hospital laboratory directorship to provide a first class service to a progressive medical staff. Please reply to Ad-630, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

MUST SUBLEASE — Medical or dental office, 1,100 sq. ft., $450 monthly. Carpeting, drapes, utilities and cleaning included. Original lease expires August 1976. Contact Dr. Robert Birchall, 1415 Third Street, Suite 502, Corpus Christi, Texas 78404. 512-882-9278 or 412-882-8226.

OPTICAL COMPANY FOR SALE situated in metropolitan area with gross sales in excess of $225,000, incorporated and enjoys established clientele, glasses and contact lenses dispensed from several offices, personnel including management available to continue operations. Principals only please reply to Ad-597 *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DOCTORS SUITES, approximately 1,000 square feet at 45c square foot including all bills and janitor. One block to hospital. Heights Med Arts Center, 411 West 21st Street, Houston, Texas. Call Irving Richie, 781-3138 or 862-2562. Write to 2100 Fountain View #29, Houston, Texas 77027.

FOR SALE: Beta Therapy Source. 62.2 m.c.'s, sealed Strontium 90 source. Dose 42 Rads per second. Dated 5-19-69. Price $500. Call C. Westphal, M.D., at 512-275-2132, after 9 p.m. 512-564-2560.

NEW OFFICE SPACE for lease in northwest San Antonio. One block from Loop 410 and Interstate 10. Will finish out to suit tenant. Contact Mossrock Professional Building, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

FOR SALE: 2 Beckman Type T EEGs. $1250 each. Available now. John E. Skogland, M.D., 1327 Medical Arts Building, Houston, Texas 77027; 713-225-4139. 8½ inch EEG paper also for sale as extra item.

FOR LEASE OR SALE—VERY MODERN CLINIC, due to owner's death. Furnished, many extras. Latest equipment including lab, x-ray, EKG. 3750 square feet. Grossed $200,000-$300,000 annually. Completely staffed with lab, x-ray, office personnel. Reasonable terms. Ample (5) open staff hospital facilities. One block from Texas Tech University and Medical School. Records of 2400 families on file. Contact Clifford E. Payne, Jr., 4601 West 17th Street, Lubbock, Texas 79416; 806-799-6789.

OFFICE SPACE FOR LEASE. Excellent location in medical center area which includes 390 bed hospital. Medical services in demand. Write or call E. T. Blair, DDS, 305-A North Alleghaney, Odessa, Texas 79761; 915-332-6994.

FOR SALE OR TAKE OVER LEASE—Buy payment. NCR Model 395 Electronic Accounting Machine. 100 memory banks. Must dispose of due to partnership dissolution. John C. Koch, M.D., P.O. Box 388, Lufkin, Texas 75901.

FOR SALE: Family practice established in 1946, now large part is industrial medicine. I wish to leave this practice in the next two to three years. Please reply to Ad-621, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

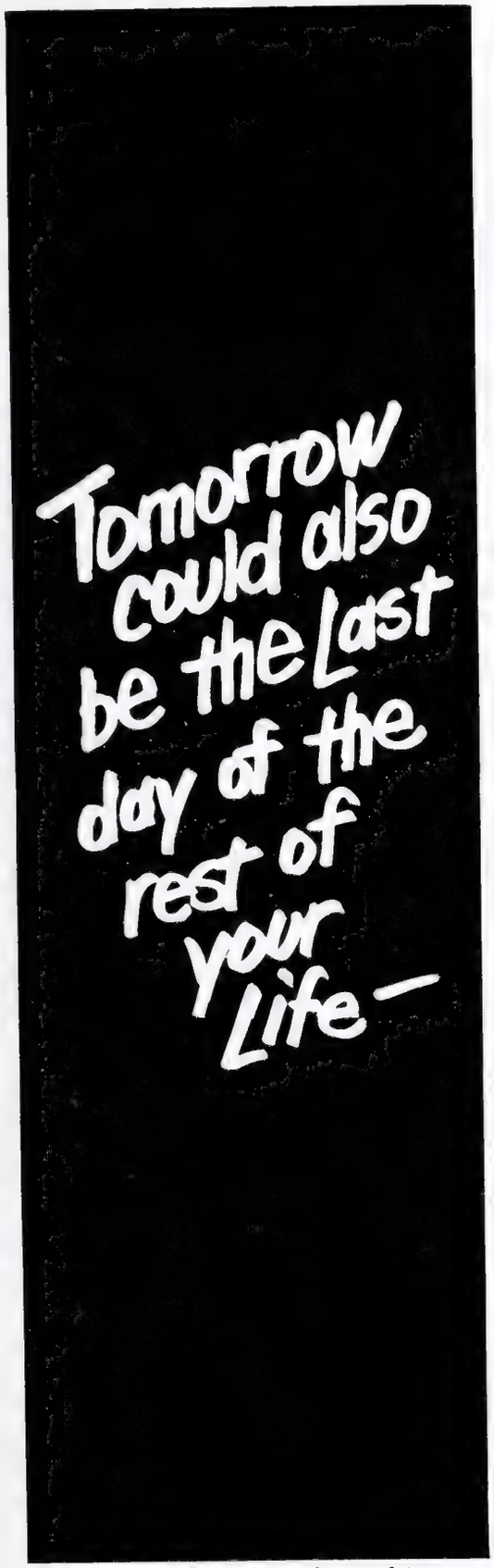
OB-GYN OR FP: Fully equipped, three examining rooms, superb location close to major hospitals. Utility bills and cleaning included. Present practice can be kept and will introduce. First lease to October 1978, thereafter on a five year basis. Coastal city of South Texas. Reply to Ad-624, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OFFICE SPACE FOR LEASE IN GARLAND: Over 1300 sq. ft. office space in modern, ambulatory care center with lab and x-ray facilities. Located in growing residential area of Dallas County. Ideal for family practice, internist, or other specialty. 3232 Broadway, Garland, Texas; 214-271-3561.

DOCTOR SHORTAGE—in affluent suburb West of Austin. Beautiful space available in new professional building. 15 minutes from hospitals. Designed with no architectural barriers—your office customized. Ample parking. 45¢ per square foot. Call or write Marge Yancy, 97 West Bee Caves Road, Austin, Texas 78746; 512-327-0350.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.



If you don't like thinking about safety, think where you might be without it.

National Safety Council

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Editorials

INFLATION, INADEQUATE FUNDING CURTAIL REHABILITATION SERVICES

A shortage of basic support funds has caused the Texas Rehabilitation Commission to curtail its program of services to handicapped citizens.

The fiscal squeeze that triggered a series of TRC cutbacks starting last fall was eased some when, in late January, Congress voted to override President Gerald Ford's veto of an appropriation bill that included HEW money for rehabilitation efforts throughout the nation.

Even though this action authorized an additional $1.9 million for Texas, the Commission will be struggling to stay within the limits of a tight budget at least through the end of its fiscal year in June.

The crisis has been caused partly by an increasing demand for TRC services, but mostly by inadequate funding that has lagged critically behind costs boosted by inflation.

While the federal grant supporting Texas' general rehabilitation program has increased 28% during the past half decade—from $29.2 million in fiscal 1971 to $37.4 million now—this is significantly less than the rate of increase in operational costs.

Costs of doing business have gone up by large percentage points for rent, utilities, salaries, mileage, per diem rates, and postage. Costs for services such as hospitalization, professional fees, tuition, books, tools, and evaluations also have increased sharply.

The Medical Consultation Committee, which has 12 MD members, works closely with TRC in recommending maximum affordable payments for compensation to physicians, trying to be fair to the doctor, the client, and the taxpayer in order to serve as many handicapped as possible with the funds available. Medical treatment—including surgery, hospitalization, and other therapies—has always been a key element in the commission's services to the handicapped. Reducing or removing disabilities has enabled thousands to enter or return to employment ranks.

More importantly, perhaps, Congress has mandated a greater emphasis on helping the severely handicapped, which has resulted in more strain on TRC funds budgeted for client service expenditures.

In fiscal 1975, earnings of TRC clients increased from $21.2 million at referral to $123.8 million at closure. That's a gain of $102.6 million in wages for more than 26,000 individuals who were transferred more often than not from tax rolls to payrolls.

And yet, health care payments—which helped a lot of this to happen—have been drastically cut, along with other TRC expenditures, to balance the year's budget.

Due to financial constrictions, gallbladder operations, hernia repair, and other so-called simple surgery is restricted from time to time, and only those who qualify as severely disabled, defined by federal guidelines, are provided needed medical services to make them employable.

Some doctors and hospitals cannot provide care for what TRC can afford, at this time, to pay.

The problem can be solved only with adequate funding. Basic support money is approximately 80% federal and 20% state; Texas receives al-

most 6% of the national total ($720 million this year) appropriated by Congress for rehabilitation services.

HR 11045, passed by the House of Representatives in December, authorizes $740 million for fiscal 1977 and $760 million for fiscal 1978. This was amended in the Senate to extend the present appropriation for one year—$720 million for 1977.

Conferees are grappling over the differences, but the two-year extension and higher authorizations of $740 million and $760 million would best serve the handicapped of Texas and the nation.

Texas can be proud of its aid to the handicapped. It has been the only state to successfully rehabilitate more than 25,000 persons in each of the past three years, but advances can be made only at the pace that federal and state funding will permit in the years immediately ahead.

Shelly E. Liss, MD, Houston, Chairman,
TMA Committee on Rehabilitation.

SCHOOL FOR POLITICAL SUCCESS: MAKE TIME TO LEARN, ACT AND WIN

We are constantly admonished to learn from our personal experiences and from history, so that we don't make the same mistake twice.

Politically, our education has been minimal, at best. Most physicians continue to make the mistake of not getting involved in politics; and as a result of this noninvolvement, we and our patients suffer from an ever increasing governmental control over the practice of medicine.

Governmental interference merely reflects the attitudes of those elected to public office. If we don't like what's happening to medicine, why don't more of us meet our responsibilities, face the realities of the times, and get aggressively involved in politics?

Specifically, what can we do in the election process? First, we must be sure that we're registered to vote. The laws have been changed recently, so the proper step to take (if in doubt about your registration) is to contact your county voting officer (usually the tax-assessor-collector) to be positive that you are eligible to vote in the 1976 elections.

Second, take whatever time is necessary to learn about the candidacies of the various individuals who seek to represent you in local, state, and national government.

Third, take the few minutes needed to vote on May 1, June 5 (run-off elections), and Nov 2, 1976.

Fourth, support the Texas Medical Association's political action committee, TEXPAC. Give direct personal support to favored candidates. Check with your TEXPAC county chairman to see who is receiving organizational support, and offer your own opinions for consideration by the candidate evaluation committee.

Fifth, volunteer some time (as much as possible!) to help favored candidates with their campaigns.

Texas physicians have been talking politics since before the closing gavel of the last session of the Texas Legislature. For increased effectiveness, TEXPAC has expanded its statewide organization to involve more physicians and Woman's Auxiliary members.

We can ill afford to make the mistake of political default yet another time; the future of quality medical care depends upon all of us—professionally and politically.

We're well organized. We know what needs to be done. Now is the time to do it—and do it well!

Sam A. Nixon, MD, Floresville,
Chairman, TEXPAC.

Letters

Family Practice: A Laudable Preference

Dear Ms. Baker:

The article, "Preferences for Family Practice Among Entering Medical Students," by George G. Meyer and associates (TEXAS MEDICINE, March 1976) is an interesting, informative work and I hope that the promise of a long-term (lifetime?) study of this class will ensue. There are a number of points in the article which call for questions as well as comments.

With a group as well controlled as an entering class in medical school, one wonders why only 96% of the class are participating in this study. Did the absent 4% refuse to take part? Possibly ill? Certainly not cutting class on the first day!

No less than twice in this article appears the ancient canard of family practice offering "the least financial reward and the poorest working conditions." It is high time that this myth perpetrated by those who roam the fluorescent-lit halls of the ivory tower should be laid to rest. We have fluorescent lighting in our offices, too, and more than that, money to pay the electric bill. Having been in any number of family physicians' offices in this state, I can testify that their equipment is excellent, the working conditions are pleasant, and the quality of care rendered is more than acceptable. Their homes and families, farms and ranches, and airplanes and boats in some instances attest to an appropriate income commensurate with the family physician's knowledge, skills, and time spent in serving those who seek him out—and many, many do seek him out. The challenge of first-contact medicine, the pleasure of holistic care in a continuum, and the fulfillment of serving families through all the joys and sorrows of life's experiences are equally as rewarding.

Concerning finances, I wonder what our legislators and, behind them, the taxpayers, will think when they read that 27% of the class of 1977 of UTMSSA, a state-supported school, plan to practice elsewhere than in Mother Texas, which is assuaging their educational hunger through the use of that most popular milk, public funds. With the shortage of physicians, particularly those in primary care fields in this state at this time, it does not appear logical for Texas to be a donor state in medical manpower. If this class is typical of the other state-supported medical schools, this would mean that several years from now Texas will be donating to other states 1½ graduating classes per year, representing who knows how many millions of tax dollars leaving home. One might say that physician flow into Texas tends to equalize this loss, but such logic probably carries very little weight with the House Appropriations or Senate Finance Committees.

Another surprise, this on the part of the authors, is that physicians have time to spend with premedical students. We give them time—often without knowing it—as we deliver services ranging from infant immunizations through caring for the knocks of childhood and adolescence to college physicals and premarital counseling for budding premeds. College students have been known to make personal visits over many miles, write letters, and utilize the telephone to discuss the field of medicine with practicing physicians. These young men and women are interested in learning about medicine, and—not so surprising—physicians are interested in discussing the pros and cons of the profession with them.

One last comment: The 1,600 family practice residency openings mentioned have grown and grown and grown until presently there are 274 programs offering 1,680 first-year openings and some 4,200 residency positions.

Dr. Meyer and his associates are to be commended for undertaking this study, and should be encouraged to continue it throughout the medical education and professional lives of students in this as well as other classes. These young men and women also should be commended for having the interest of their fellow man at heart and choosing that early date to decide on service both in the specialty and in areas where the need is great.

Sam A. Nixon, MD, Floresville.

Who Checks Up on Government?

Dear Ms. Baker:

Various checks and systems are placed on the quality of the service provided by physicians to patients (consumers). By what means, or provisions, may physicians be assured of the quality of

accuracy, fairness, and responsibility of Medicare in their day-to-day conduct of fiscal business with both consumers (patients) and providers (physicians)?

What authoritative body has the power and/or responsibility to oversee Medicare's provision of payments in accordance with promises, implied and documented, to the public? At present, Medicare has managed to maneuver Texas physicians into a position where the physician appears to be at fault at any time Medicare chooses to withhold a part of payment. The resultant undermining of public confidence in physicians must be intolerable to the TMA, and such deceptive and harmful practices must be eliminated. Medicare has capriciously and repeatedly withheld monies from both physicians (assigned claims) and patients (nonassigned claims). Upon inquiry, the explanation invariably implies overcharging of the patient by the physician. When the physician or the patient is underpaid, the physician has no right or means of appeal unless the amount in question is over $100 per service, or per claim.

The TMA should demand that the fiscal practices of Medicare be properly policed, monitored, and managed in a responsible, unbiased manner. If Medicare simply lacks the fiscal resources to provide what the public is promised, then the public must be informed, by Medicare, that Medicare is unable to provide its coverage "as advertised" due to shortage of money, and that failure to pay claims is due to that shortage. If funds are indeed available, failure by Medicare to pay claims properly and fairly must be explained.

The pursuit of these injustices cannot practically be the province of an individual, but must be the responsibility of a larger organization with proper legal and investigative resources. This matter surely is important enough to be discussed at the higher levels of organized medicine, and to merit a follow-up statement to the public.

In the meantime, I suggest that these injustices be pointed out to our patients in a responsible and truthfully worded note, which should also include names and addresses of appropriate governmental representatives. Our patients should be urged to demand fair treatment by Medicare. They pay taxes in small towns as well as in large cities, but few are aware of Medicare's penalty for living in smaller cities and towns. This is only one of many injustices for which we physicians are ultimately being blamed ("more than allowable charge").

Tom F. Bryant, MD, Paris.

Editor's Note: Dr. Bryant's letter addresses the problem with which TMA has been at issue with the fiscal intermediary for Medicare and the Bureau of Health Insurance of HEW for several years. This is the procedure of profiling a physician according to the area in which he practices rather than the nature of his service regardless of where he practices. The requirement imposed upon the fiscal intermediary for Medicare charges is determined by selecting the lower of (1) the physician's customary charge for that service; (2) the "prevailing" charge (that charge made 75% of the time by physicians of like specialty in the same *geographic* locality); or (3) the actual charge made for the service. If the *prevailing* charge for an area is lower than the physician's customary charge, the prevailing charge is used. TMA has been arguing that the physician's customary charge is the one which should be used to determine his profile. We have not been successful in having our views adopted, but we continue to press for this objective. As it now stands, the only time a physician's customary charge is used is when it is *lower* than the *geographical area prevailing charge*. Thus, we no longer have the UCR fee concept (usual, customary and reasonable). Instead, it is replaced by the "prevailing charge" for the geographic area, or phrased another way, we have area fee schedules.

Good assistants are valuable assets

Good medical assistants are worth keeping. Their warmth, desire to be helpful, courtesy, and efficiency tell each patient in a hundred subtle ways, "The doctor cares about you; all of us do."

Compassion is wonderful for public relations, but today's medical assistant needs special skills and knowledge as well. An assistant's duties may range from scheduling appointments to explaining diagnostic procedures, from taking a medical history to maintaining equipment, from handling the telephone to handling emergencies, from sorting the mail to taking care of practically all financial aspects of the practice.

Every physician trains his assistants to do things his way, and teaches them what they need to know. That is fine, but there is no permanent guarantee in any office situation, and medical assistants need to be professionally prepared to step into new positions with competence and proficiency.

Realizing the necessity for continuing education, many physicians encourage their assistants to join the American Association of Medical Assistants, Inc.

The purpose of this organization is to improve skills and elevate professional status; it has nothing to do with trade unionism or collective bargaining.

Continuing education for medical assistants is good business and it makes good sense; in fact, many physicians are so pleased with the benefits that they pay AAMA dues for their assistants and encourage them to take full advantage of the educational opportunities that it offers.

The objectives of this worthy group are (1) to inspire its members to give honest, loyal and efficient service to the profession and to the public which they serve; (2) to strive at all times to cooperate with the medical profession in improving public relations; and (3) to provide educational services to increase the knowledge and professionalism of its members and to stimulate a feeling of fellowship and cooperation among its state societies and local chapters.

One of the AAMA's current projects is cosponsored by the Texas Medical Association; it is a series of medical-legal seminars for all physicians and their medical assistants and other employees, and the aim is to help prevent malpractice claims.

In short, our medical assistants are worth keeping, and their professional development is just as advantageous for us as it is for them.

Nym L. Barker, MD, President,
Texas Medical Association.

May76 TexasMedicine

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estoring function to palsied facial nerve
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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.
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ON THE COVER

One of the important developments in diagnosing asymptomatic cases of gonorrhea is the use of transport media, which will keep the gonococcus viable long enough to allow the physician to inoculate material and mail it to a laboratory where it can be cultured properly. An article on gonorrhea begins on page 45.

NEXT MONTH

Articles scheduled for June include malpractice insulation in Texas; how your institution can get the most for the least from its television facility; an exercise program for senior adults; and the hemodialysis of children.

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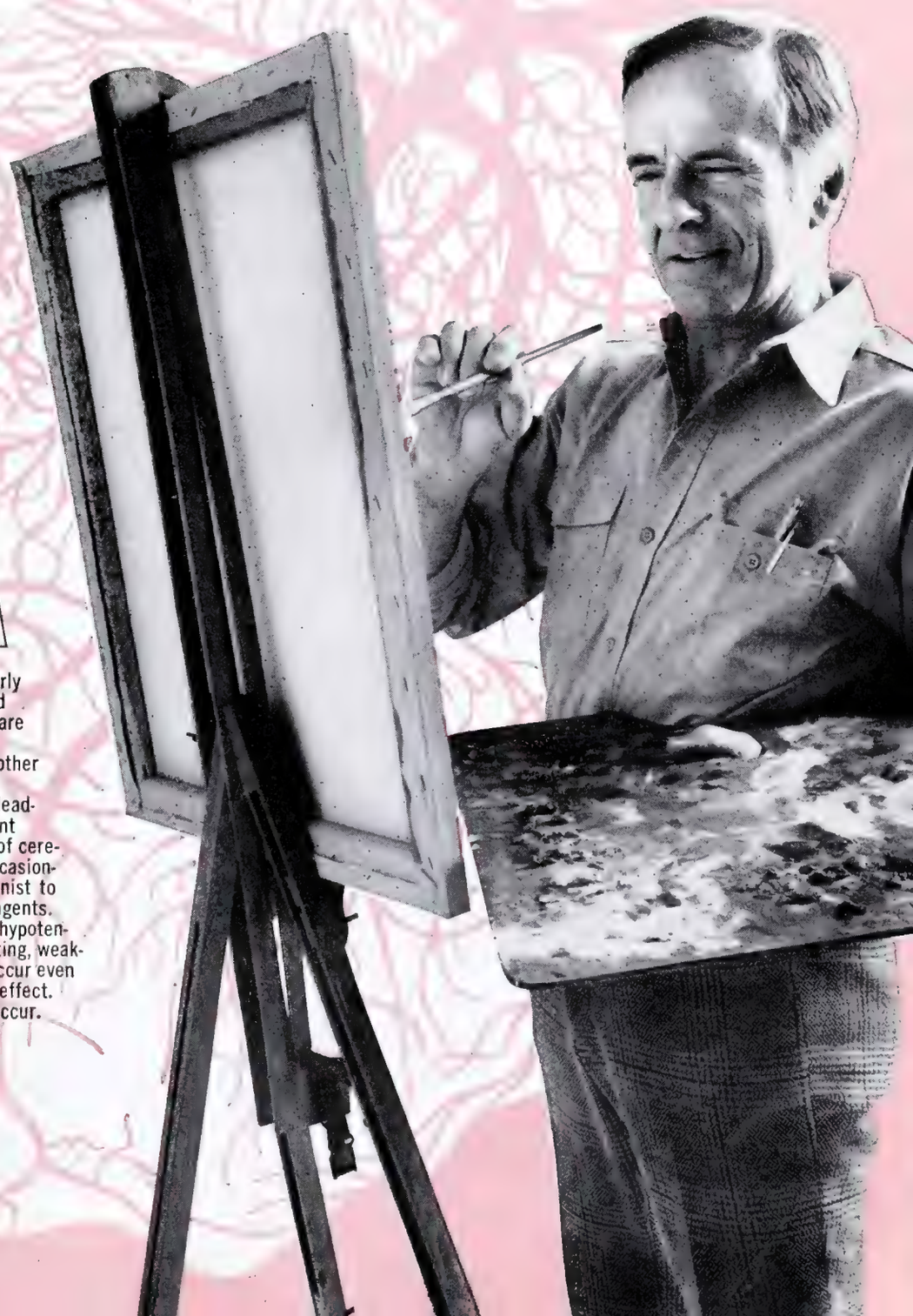

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Contraindication: Idiosyncrasy to this drug.
Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.
Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.
Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.
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NEWS

Delegates to study Texas utilization review situation

A significant number of Texas hospitals and physicians face denial of payment for medical care given to Medicare, Medicaid, and Title V patients unless utilization review programs are placed into operation in the near future.

Responding to the need for coordinated action to meet this impending problem, a special reference committee of the Texas Medical Association's House of Delegates will meet May 6 in Dallas to consider all aspects of the issues surrounding utilization review. It is estimated that 30% to 40% of Texas patients participate in tax-financed health care programs.

The most recent development in the utilization review situation was HEW's March 30 announcement of new proposed regulations for federal programs. These regulations replace those withdrawn for rewriting in 1975 after the American Medical Association sued HEW concerning the then final utilization review regulations.

The following are major requirements of the newly proposed regulations. (1) Each hospital medical staff must establish a list of conditions and diagnoses for which hospitalization is appropriate and needed. Hospitalization for a condition or diagnosis on this list will be presumed to be necessary. (2) Each hospital medical staff must adopt criteria for admission based upon regional norms. These criteria will be used to screen admissions made for purposes not on the list of conditions and diagnoses. (3) The screening of admissions must be done within three hospital working days. (4) Elective surgery or elective procedures must be screened for necessity before the elective surgery or procedure is performed, and this screening must also be done within three hospital working days. (5) A date for continued stay review must be established by diagnosis or condition. If it is necessary for the patient to continue in the hospital beyond the initial period, then review for that extended stay must be completed within two hospital working days.

The regulations will serve as interim rules for utilization review programs until Professional Standards Review Organizations (PSROs) are fully implemented.

Various utilization review programs are required by laws at both the national and state levels. Among these are requirements encompassing PSROs and the Texas Admissions and Review Program (TARP).

PSROs were scheduled for implementation on Jan 1, but whether or

when PSRO will get off the ground in Texas this year remains uncertain. After hearing a TMA law suit, US District Court declared nine PSRO areas for Texas unlawful and invalid. The court enjoined HEW from implementation of PSRO until full reconsideration of designated areas has been completed. HEW appealed the decision to the U S Court of Appeals, Fifth Circuit, in March. Texas is awaiting further developments in its long-pursued quest for a single statewide PSRO directed by physicians.

TARP was developed in Texas in anticipation of required admissions review and concurrent evaluation based upon developed criteria. More than 100 sections of the subsequently passed National Health Planning and Resources Development Act of 1974 (PL 92-603) related to health care delivery including a provision which called for utilization review of all Medicare and Medicaid admissions. The section permitted a waiver for Medicaid if the state had a utilization review program more effective than Medicare. The Texas Department of Public Welfare applied for and received such a waiver based upon its implementation of TARP.

In addition to the present government programs, it is anticipated that physicians will have to deal with other aspects of utilization review in the future. Commercial carriers and all health care insurers are expected to request, and contract for, utilization review assistance. National hospital and training program accrediting agencies have a continuing need for realistic utilization review assistance. The continuing education potential of utilization review activities will be enhanced significantly by standardization of procedures.

In a report to the House of Delegates, the TMA Executive Board pointed out the common aspects of utilization review programs: (1) Texas and federal laws require periodic review of tax-supported medical programs, collection of medical statistical data, and justification of admissions, treatment, medical necessity, propriety of setting, efficacy of treatment, and length of stay; (2) federal and state agencies must promulgate regulations to comply with the laws; and (3) the statutory and the regulatory mandates require review procedures for all phases of tax-financed health care.

In its evaluation of the situation the Executive Board concluded that physicians must participate in the collection and evaluation of medical data to preserve quality medical care. The board further stated that it is vital that physicians become involved in the systems designs so that accurate data is collected.

NEWS

Rural loans awarded

The State Rural Medical Education Board has awarded a total of more than $84,000 in loans to 19 medical students for fiscal year 1976 with another $100,000 committed to the needs of these and other students in fiscal year 1977. The most recent grants were approved at the March 28 meeting of the board.

The rural medical education board, established by the legislature in 1973, is authorized to make loans to medical students with the stipulation that they will serve in rural areas upon completion of their training. The students will receive credit for one-fifth of the loan for each year of rural practice, thus the loan is retired in five years.

The goals of the program are to provide needy students assistance with the high cost of medical education and to provide a strong incentive for practicing in rural areas.

According to recent figures, 15 of Texas' 254 counties have no doctors. In addition, 32 Texas counties or portions have been designated as "critical medical shortage areas" by the Department of Health, Education, and Welfare.

The students are not required to attend a Texas medical school, but their practice must be in the state. Approximately 188 Texas counties have fewer than 25,000 persons, qualifying as "rural."

The board is close to having committed all of its $200,000 biennium appropriation and will be looking for a new budget appropriation when the legislature meets in 1977. The board is also authorized to receive donations to the loan fund from any group or individual.

TMA supports immunization plan

The Texas Medical Association has announced its full support of the planned nationwide immunization against swine influenza as proposed by President Ford.

Dr. N. L. Barker, TMA president, said swine flu in humans poses a serious potential health problem. A swine flu epidemic in 1918 killed 20 million people worldwide.

Dr. Barker urged the medical and pharmaceutical professions to make all possible efforts to have the vaccine itself and a means of distributing it ready to immunize all 215 million U S citizens before next winter's flu season.

At its meeting in early May the TMA Council on Community Health Affairs is expected to formulate a plan of action for Texas physicians in regard to the immunization program.

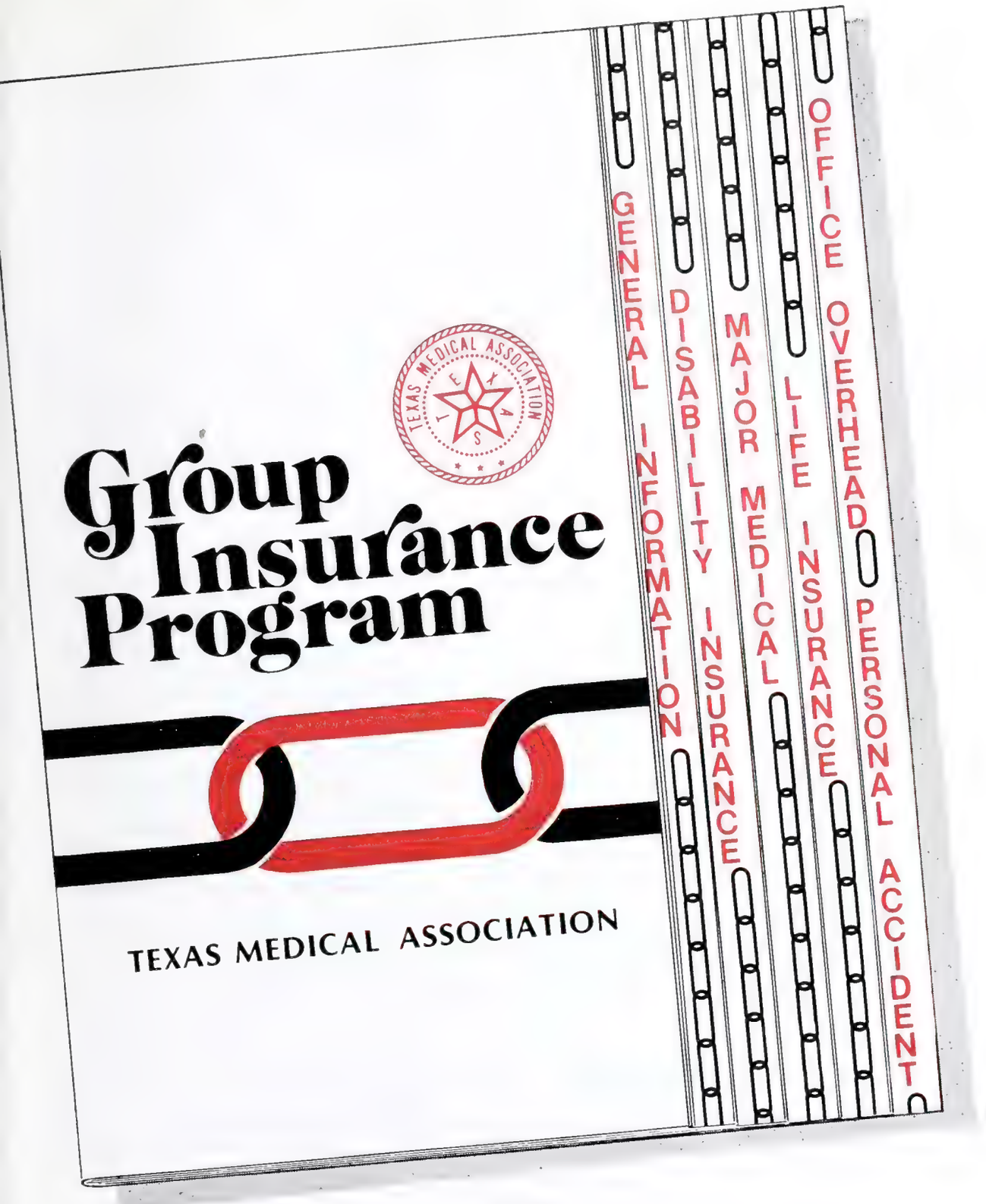
An estimated 48 million fertilized chicken eggs may be used to produce enough vaccine . . . Health officials say they foresee few problems in getting enough fertilized eggs and making the vaccine in time for next winter, when experts predict the flu will begin to spread.

At press time, a bill carrying $135 million to provide vaccine to immunize most Americans against swine flu had been sent to the White House. President Ford is expected to sign it.

Medicare assignments decreasing in Texas

According to Fred W. Rodgers, vice president for government programs of Blue Cross-Blue Shield of Texas, the number of Texas physicians who accept assignment of Medicare claims is decreasing.

During January, 1976, the percentage of assigned physicians claims was 49.4%, as contrasted with the 51.6% national figure. In the past, the percentage of assigned Medicare Part B claims in Texas has usually been a little higher than the national average. During January, 1970, 65.78% of the Part B claims filed by physicians were assigned.



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NEWS

Medical school applications drop

For the first time since the inception of the Medical and Dental Application Center of The University of Texas System, there has been a drop in the total number of applicants. The drop occurred for both medical and dental applicants for the entering classes of 1976.

The center had a total of 2,713 medical applications, down 16 from 1975. The average grade of the applicant pool was 3.36 (on 4.0 scale); the average of those selected was 3.60. The average MCAT score of the applicant pool was 562; the average of those selected was 602. Of the 1,899 Texas resident and 814 nonresident applications, 567 residents and 60 nonresidents were accepted to the system's four schools.

Baylor College of Medicine, Houston, reported an applicant pool of 3,670 for 168 entering places. Texas residents traditionally compose 70% of the school's entering class. The average grade point average of the applicant pool was 3.37; the average MCAT score was 581.

Texas Tech University School of Medicine has 1,416 applicants for 40 places in the upcoming entering class.

Survey on families released

The Early Childhood Development Division of the Texas Department of Community Affairs has published *Texas' Youngest Children,* a summary report highlighting major findings of a survey of Texas families with children under six.

The information in the publication is designed to stimulate discussion about the needs of young children and their families and to promote examination of alternative methods of meeting those needs.

Several common characteristics of families emerged from the survey data. Among these characteristics were (1) families were mobile; (2) families too often were poor; (3) parents were hardworking; (4) many parents had limited education; (5) one-parent families were raising children under unusually stressful circumstances; (6) many families were not covered by health insurance; and (7) many families needed care arrangements for their children outside the home.

A longer, technical report of the findings of the survey is available for researchers and others who may wish to explore the findings in depth.

TEXPAC receives top national award

The Texas Medical Political Action Committee (TEXPAC) has received for the second consecutive year the "All Events" first place award from the American Medical Political Action Committee (AMPAC). The recognition is the top membership honor given by AMPAC to state political action organizations.

In addition, Texas set an AMPAC record for membership category awards by placing first in contributions per member; second in largest increase over prior year; second in sustaining membership; and third in total contributions.

TEXPAC set new records in 1975 in contributions and membership figures. Political dollar contributions increased 33.5% over 1974.

The top membership award was pre-

"The tests show that the diaper rash is really jockey itch."

sented to Dr. Sam A. Nixon TEXPAC board chairman, during the AMA/AMPAC Public Affairs Workshop in Washington, DC in April.

Medical administration program started

The nation's first medical administration graduate program will be established by the Northwestern University School of Management in cooperation with the American Medical Association.

The two-year program leading to a masters degree is being designed and prepared by medical executives for the rapidly increasing complications and challenges in medical organization work, according to the AMA.

In addition to the degree program, Northwestern is considering an annual three-week certification summer course for medical administrators and a yearly two-day management updating seminar for medical society executive staff.

Inquiries should be directed to the Office of the Executive Vice President, AMA, 535 N Dearborn St, Chicago 60611.

Citizens' group fighting health planning law

A grassroots movement to inform the public about the adverse effects of the National Health Planning and Development Act of 1974 (PL 93-641) on rural health care is under way in Northeast Texas.

A group of Cass County citizens who are not engaged in the health care field has organized to seek repeal of the law. From its base in Linden, the Organization for Preservation of Local Medical Services, Inc is organizing town meetings, telephone committees, volunteer help, media campaigns, and various other activities to inform people about the law.

In particular, the group objects to the plan because it is viewed by the group as establishing a two-level system of medical care. The group is fearful that the smaller hospitals will be relegated to providing primary care and the "center" hospitals will then provide advanced care on a geographically integrated basis with centers for the treatment of obstetrics, intensive and coronary care, and emergency medical and radiation therapy services.

The citizens' group feels that medical consumers in the rural areas of the country will be adversely affected by the plan for a variety of reasons including the resulting reduction in rural hospital and probable departure of physicians. The residents of Cass County hope to generate a national movement for repeal of health planning legislation.

Brand-name prescribing for children urged

Physicians treating children should generally prescribe specific brand-name drugs, because "the data which would allow the pediatrician to prescribe generically and expect consistent therapeutic results do not exist," according to the American Academy of Pediatrics' Committee on Drugs.

For several years, some consumers, legislators, and health administrators have advocated generic prescribing, which would allow pharmacists to substitute less expensive, generically equivalent drugs for more expensive, brand-name medications.

However, the AAP committee said, "few drug products have been appropriately studied for bioavailability or therapeutic equivalence in infants and children." The committee made the statement in the February issue of *Pediatrics*, the academy's monthly scientific journal.

The committee said that certain types of drugs, antibiotics for example, have been tested enough so that "generic prescribing may be used with relatively more confidence."

The statement also pointed out that

NEWS

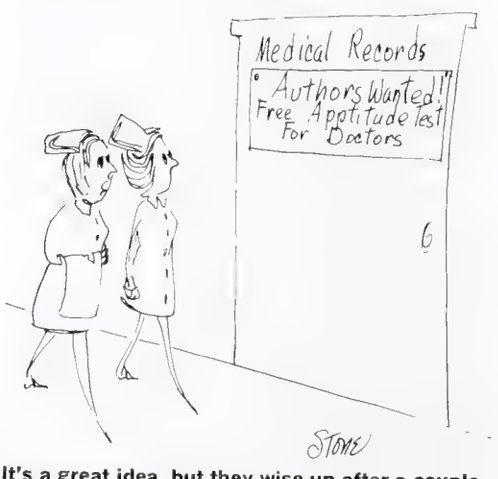
pharmacist's fees, overhead, the size of the prescription," and innumerable other variables may determine the cost (of the medication) to the patient more than the wholesale list price of a drug."

The committee said it "strongly supports the use of the least expensive medication which provides effective therapy. However, the physician's duty to the patient is to prescribe reliable drugs with reproducible therapeutic effects at a given dose. Therefore, until suitable bioavailability data in children are determined and therapeutic importance recognized, the physician should continue to prescribe the products which have shown significant clinical effectiveness in his hands or in published clinical trials."

Insurance to pay for second opinions

Blue Cross-Blue Shield of New York has initiated a small-scale plan to pay for a second opinion about the need for any non-emergency operation. The program was started in an attempt to answer some of the controversial questions regarding whether unnecessary surgery is being performed in the United States.

The New York plan is believed to be the first of its kind for Blue Cross-Blue Shield in the country. The target is to sign up six or seven large groups with a total of about 150,000 individuals for the program. Negotiations are under way currently.



"It's a great idea, but they wise up after a couple of charts."

Football injuries reported by schools

Ninety-five percent of the high schools reporting to the University Interscholastic League on the 1975 football season indicated some occurrence of injuries. Eighty-eight percent of Texas schools were represented in the report.

Leading the list of injuries were sprains (35%), bruises (27%), and fractures (14%). The majority of the injuries (82%) occurred during game time. The knee was the part of the body most often injured (22%), followed by the ankle (17%), and the shoulder (10%).

Other statistics revealed by the reporting process included: (1) 43% of the injuries occurred in October, 39% in September, 16% in November and December; (2) 43% of the injured players were 17 years old, 25% were 16, and 17% were 18 or above; (3) 11% of the injured players were hospitalized; and (4) 5% required surgery.

The largest number (28%) of injuries occurred in AAAA schools followed by AA (24%), A (19%), and AAA (15%).

Ethics committee established

A National Advisory Committee on Ethics will be set up by the American Medical Association in an effort to focus attention on the moral and ethical challenges facing American institutions.

The AMA will help launch and finance the independently functioning committee, to be headed by Fred T. Allen, chairman of the Pitney Bowes Corp, Stamford, Conn.

The stated purpose of the committee is to call attention to the importance of the ethical underpinnings of business, law, medicine, journalism, education, and society as a whole. The committee is in the developmental stages.

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*First Health and Nutrition Examination Survey, DHEW Pub. No. (HRA) 74-1219-1, National Center for Health Statistics, Rockville, Maryland. (This report indicates that approximately 95% of the children 1-5 years old had iron intakes *below* the standard set by the Food and Nutrition Board of the National Academy of Sciences.)

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J. Paul Smith
Administrator

Health department offers film, slides

A film and a slide presentation of interest to the medical community are now available from the Texas Department of Health Resources.

"Heimlich Maneuver" is a ten-minute movie illustrating the technique for on-the-spot treatment of the "cafe coronary." The Texas Medical Association's Committee on Emergency Medical Services recently endorsed the film and recommended it be shown to medical societies, restaurateurs, and the general public. Copies are available from the film library of TDHR.

"To Save a Life," is a sound-slide presentation of the Emergency Medical Services Division of TDHR. The filmstrip describes the basic components of an effective emergency medical services system. The TMA committee also recommended this program's presentation to medical and civic organizations.

Public favors physicians in health care sector

A new Harris survey shows that the public favors physicians more than any other element of their health care.

Medical specialists top the survey. They were viewed favorably by 83% of the public and unfavorably by only 9%. General practitioners followed closely with an 81% favorable and 16% unfavorable response. Confidence in general practitioners has increased in the past five years, from 72% favorable and 19% unfavorable in 1968, to this year's figures.

Hospitals in general came in fourth in the poll, with a 70% favorable, 27% unfavorable rating. The survey showed that while the public is generally satisfied with its health care, nearly two-thirds of those responding are not willing to pay 10-15% higher hospital costs, even if guaranteed better quality service and more personal attention.

The poll was conducted for the Federation of American Hospitals in mid-December and was presented by Harris at the group's recent annual meeting.

Report shows TB costly, significant from public health view

NEWS

Tuberculosis remains the most expensive communicable disease in Texas and is the infectious disease of greatest importance from the public health standpoint, according to the recently released annual report of the Bureau of Tuberculosis Services of the Texas Department of Health Resources.

The closing of the 1974-1975 annual report period concluded the tenth year of the Tuberculosis Control Program in the state. The annual statement reports that the achievement of the goal of eradicating tuberculosis as a public health problem is progressing.

The annual report covers the progress of the bureau for the past ten years with emphasis on the past year including morbidity and mortality rates, program objectives and accomplishments, and regional activities.

"I have an intangible discomfort which defies description by such trite words as ache or pain."

NEWS

License statement facilitates anatomical gifts

Texans may now donate their bodies, or parts of their bodies, to hospitals, physicians, medical schools, or organ banks by executing a statement on the reverse side of new driver's licenses.

An amendment to the Texas Anatomical Gift Act, effective Jan 1, has now been implemented in the state. The statement must be signed and witnessed to comply with the act. The gift is invalid on expiration, cancellation, revocation, or suspension of the licenses and to be valid, the statement must be executed each time the license is renewed.

Houston researcher designs self-test for oral cancer

A graduate student researcher at The University of Texas School of Public Health, Houston, has designed a simple self-test which is aimed toward helping individuals to examine themselves for signs of oral cancer.

Helene Bednarsh, a licensed dental hygienist who is now completing work on her masters degree in public health, recently demonstrated her test to Houstonians in a month-long teaching/screening drive aimed at people 35 years old and older. Ms. Bednarsh has also designed an illustrated pamphlet which shows the user how to check various parts of his mouth, face, and neck for symptoms. She plans to evaluate the success in teaching the self-check method to Houstonians as the basis of her master's degree thesis.

Physicians support continuation of Medicaid program

More than half of U S physicians polled by the American Medical Association say they support continuation of Medicaid—the federal government's program for financing medical care for the poor.

The problem facing doctors who did not give unanimous support is basic —government reimbursement for services often does not cover costs.

Results of the poll were published in the March 22 issue of American Medical News' monthly section on socio-economic issues of medicine, Impact.

Over three-fourths of the doctors polled declared, however, they would like to see modifications in the Medicaid program as now administered. A major objection cited is that reimbursement for medical services by the government is sometimes too low to cover costs.

So strong are physicians' feelings about Medicaid reimbursement levels and their inadequacy that four out of ten physicians said that unless fees are adjusted upward in 1976, they will see fewer Medicaid patients in the next 12 months.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

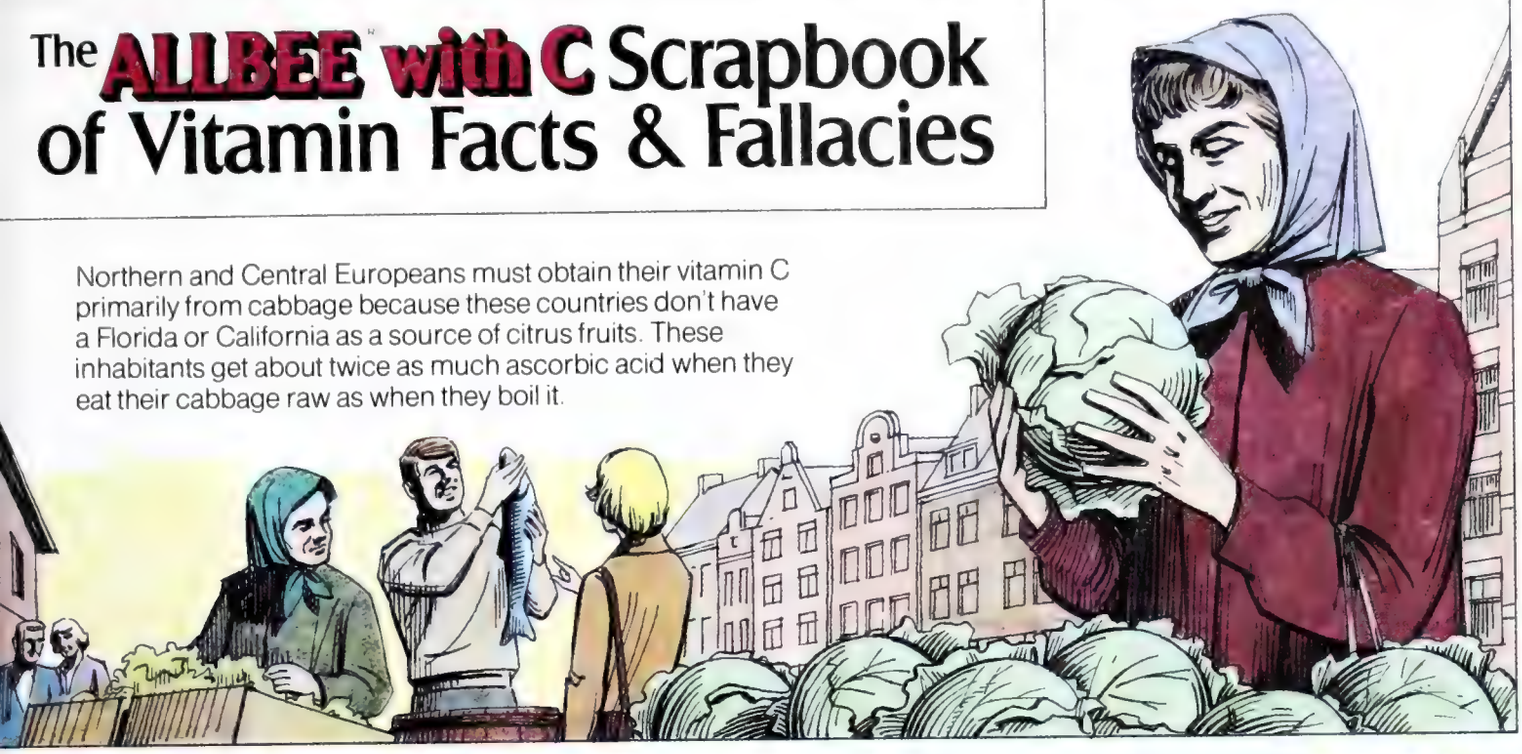
(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

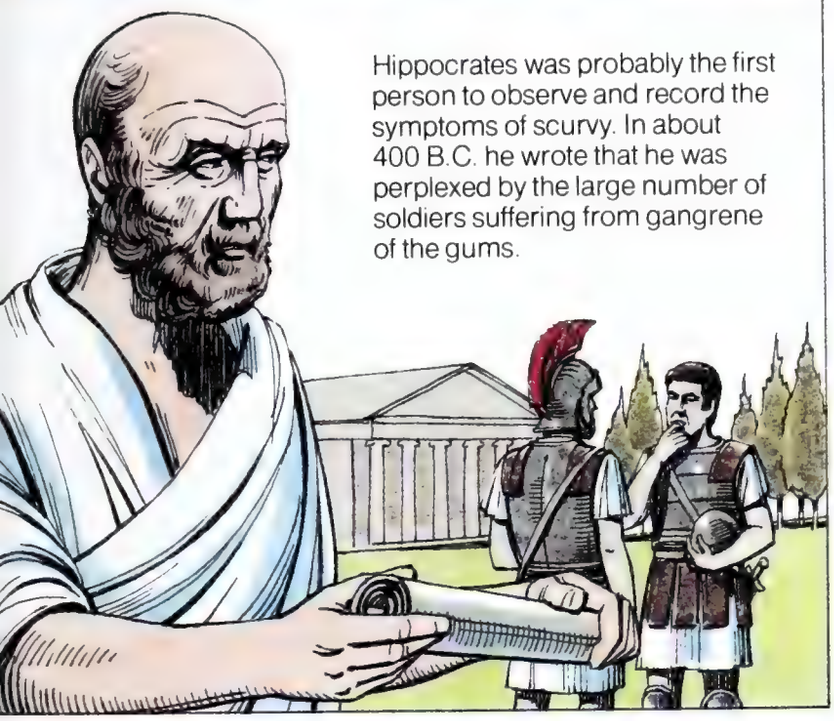
Investment Media*	1976 Through 3/31/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+11.2%	−33.0%	− 6.2%	1.3%
Loomis-Sayles Mutual Fund	+ 9.9%	−21.0%	− 3.7%	3.1%
Mercantile Bank Equity Fund	+14.5%	−35.8%	−16.5%	3.4%
Mercantile Bank Fixed Income Fund	+ 3.9%	−13.5%	− 8.6%	7.8%
T Rowe Price Growth Stock Fund	+ 9.0%	−34.1%	− 1.9%	2.1%
T Rowe Price New Income Fund	+ 2.0%	N/A	N/A	7.9%
Stein Roe & Farnham Balanced Fund	+10.5%	−24.9%	+ 4.1%	3.0%
Standard & Poor 500 Stock Average	+13.9%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+17.2%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

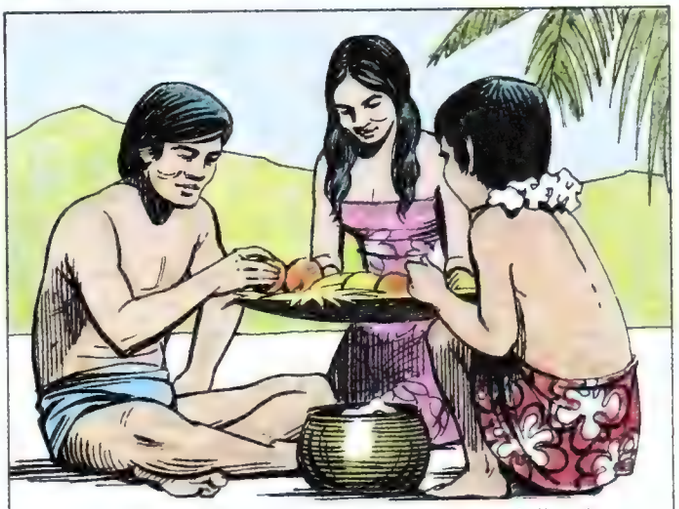
The ALLBEE® with C Scrapbook of Vitamin Facts & Fallacies

Northern and Central Europeans must obtain their vitamin C primarily from cabbage because these countries don't have a Florida or California as a source of citrus fruits. These inhabitants get about twice as much ascorbic acid when they eat their cabbage raw as when they boil it.

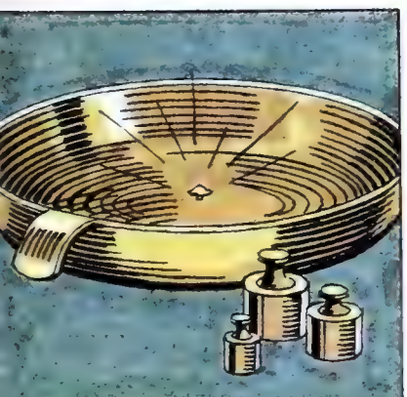




Hippocrates was probably the first person to observe and record the symptoms of scurvy. In about 400 B.C. he wrote that he was perplexed by the large number of soldiers suffering from gangrene of the gums.



People in more primitive, less commercialized societies often eat better balanced diets than affluent Americans. These natives instinctively choose nourishing foods because their bodies tell them what they need. The dietary habits of Americans are often influenced by television commercials that appeal to our wants instead of our needs.



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hyoscine hydrobromide	0.0065 mg.	0.0065 mg.	0.0195 mg.
phenobarbital (warning: may be habit forming)	(¼ gr.) 16.2 mg.	(½ gr.) 32.4 mg.	(¾ gr.) 48.6 mg.

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CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: TMA MALPRACTICE SURVEY PRESENTED. The Texas Medical Liability Study Commission held its ninth official meeting March 19. Dr. N. L. Barker, president of the Texas Medical Association, officially presented to the 18 commission members copies of the 1975 TMA Medical Professional Liability Insurance Survey. TMA representatives presented the results of the survey in summary form.

WASHINGTON: HEW REGULATION. The Department of Health, Education and Welfare has set up a new office to smooth the way for its department's regulations. The goal of the Office of Regulatory Review, according to Douglas Harlan, PhD, special assistant to the HEW secretary and project director, is to involve people who will be affected by regulations before the regulations are written. The office is considering a procedure called "notice of intent to publish proposed rule-making." Under this plan, an announcement of the intent to write regulations would be published in the *Federal Register*. The announcement would describe the issues to be covered and comments would be solicited.

AUSTIN: MALPRACTICE REVIEWED BY TEXAS HOUSE. The House Insurance Committee's Subcommittee on Malpractice met in Austin March 26 to hear status reports relating to the activities of the Texas Medical Liability Study Commission and the Joint Underwriting Association.

WASHINGTON: HEALTH PLANNING REGULATIONS. Pending regulations for implementation of the new health planning law were listed by a delegation of nine governors as their number one concern when the group recently visited President Ford and Cabinet officers. The delegation was led by Gov Robert D. Ray of Iowa, chairman of the National Governor's Conference. In a statement prepared for the meeting, the governors said they agree with the objectives of the National Health Planning and Resources Development Act of 1974 but are greatly concerned that the law has reduced their ability to set health policy. The emphasis of the ongoing dispute between governmental bodies and provider groups amounts to a powerful lobbying effort for the position of the states in final formation of planning regulations. If HEW implements a restrictive policy in setting national planning guidelines, states will not be able to structure a program for their individual needs. The governors said they will stand behind efforts to make the law workable including legislative amendments.

AUSTIN: NEW MALPRACTICE COMMISSION MEMBERS. George Reed of Houston and Landon Alexander of Arlington have resigned for business reasons from the Texas Medical Liability Study Commission. Appointed in their places are William Mizell of Houston, a representative of Travelers Insurance Company and Robert Bezucha of Dallas, a representative of Hartford Accident and Indemnity Company.

WASHINGTON: NHI. Rep Brock Adams (D-Wash), chairman of the House Budget Committee has cast gloom on prospects for national health insurance. In a recent speech before the American Hospital Association, he said that Congress will have at most $15 billion for all new spending programs. For these reasons he said, "We must be realistic and admit we cannot enact a new and comprehensive national health insurance program unless and until we also enact successful measures to bring in new budget revenues or to attain significant savings that would allow us to support that program on a continuing basis." Meanwhile, the House and Senate budget committees have been notified to earmark funds for national health insurance during fiscal 1977. The House Ways and Means Committee suggested to the House Budget Committee that $200 million be set aside. The Senate Finance Committee notified the Senate Budget Committee that an estimated $400 million should be allocated. These estimates, which are tentative and not binding, could permit some action on national health insurance later this year.

AUSTIN: JUA BOARD ELECTED. William Mizell of Travelers Insurance Company, Houston, and Robert Bezucha of Hartford Accident and Indemnity Company, Dallas, have been named chairman and vice chairman respectively of the Joint Underwriting Association. O. A. Edgeworth of State Farm Insurance, Austin, has been elected secretary-treasurer. The newly elected nine member Board of Directors also includes Leroy Heer, United Services Automobile Association; O. V. McDonald, Employers Casualty Company, Dallas; O. V. Bennett, Great Southern Fire and Casualty Insurance Company, Austin; Dave Wilson, Medical Protective Company, Fort Wayne, Ind; J. Paul Cooke, St. Paul Insurance Company, Lubbock; and Roy C. McCullogh, American General Insurance Company, Houston.

IDAHO: MALPRACTICE LIMITS. The American Medical Association will file an amicus curiae brief before the Idaho Supreme Court appealing a district court decision on Idaho's professional liability insurance legislation. The Idaho Medical Association is seeking to overturn the district court's ruling that a provision of the law limiting malpractice recoveries is unconstitutional under the Idaho Constitution. The AMA brief seeks to reaffirm a district court ruling that held that the equal protection and due process guarantees of the U S Constitution are not violated by the Idaho legislation.

WASHINGTON: CABINET OFFICE PROPOSAL. The AMA Board of Trustees, after reviewing recommendations of the Council on Legislation, recently voted to support a draft bill creating a Cabinet level department of health, as called for by the AMA House of Delegates. The department would administer all health programs now under HEW jurisdiction. A coordinating commission would work toward eliminating wasteful duplication of health services and resources. The board also approved draft legislation to correct inequities in the method of calculating coverage in the average earnings of physicians under social security.

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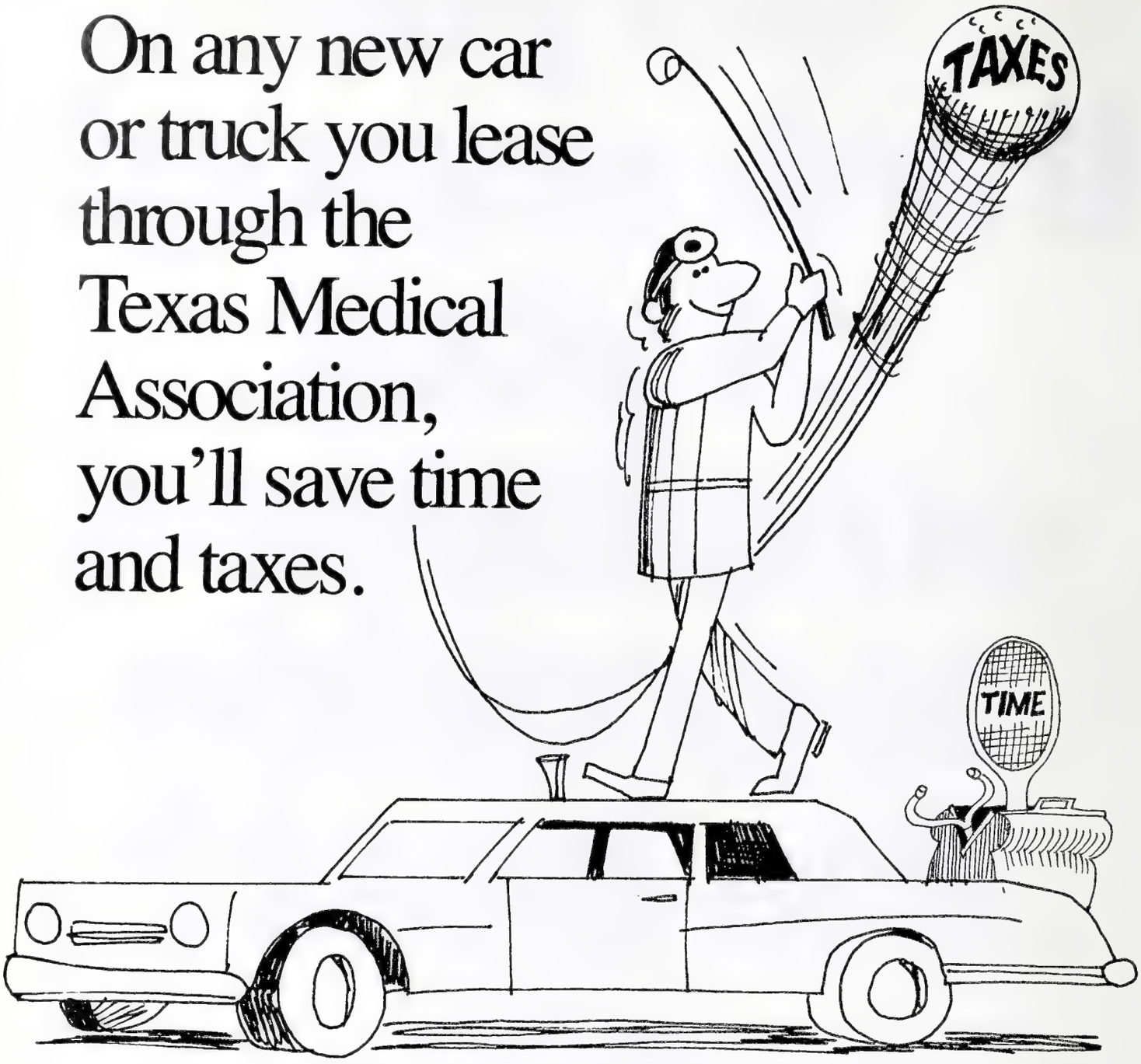

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COMING MEETINGS

TEXAS MEDICAL ASSOCIATION ANNUAL SESSION

Fifty-two guest speakers, 20 section programs, 22 curbstone consultations, 13 continental breakfast presentations, and live teaching demonstrations will be featured at the 1976 Annual Session of the Texas Medical Association. The meeting will take place in Dallas, May 6-9, 1976. The program emphasizes continuing education, and physicians who attend will be eligible for Category I credit toward the AMA Physician's Recognition Award. For further details, see information in this section regarding meetings of related societies, and Continuing Education Courses, pp 35-39.

Contact: C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS

The American College of Obstetricians and Gynecologists will meet in Dallas, May 10-13, 1976. Among the highlights of the meeting are the inauguration of Dr. TN Evans, Detroit, as president of ACOG, and a presentation by Alexander McMahon, President, American Hospital Association, Chicago. Continuing education courses are planned for May 8 and 9. These, as well as other activities during the meeting, are accredited for Category I, AMA Physician's Recognition Award and ACOG cognate credits.

Contact: Dr. Warren H Pearse, Exec Off, 1 E Wacker Dr, Suite 2700, Chicago 60601.

SOUTHWEST ALLERGY FORUM

San Antonio is the site of the 1976 Southwest Allergy Forum, scheduled for May 22-25, 1976, at the Hilton Palacio del Rio Hotel. The scientific program, formulated by Drs. Max I Michels and Ted Kniker, will be divided into three morning sessions.

Contact: Dr. Peter B Kamin, Chmn, Publicity Committee, 601 Oak Hills Medical Bldg, San Antonio 78229.

CURRENT MEETINGS IN TEXAS

AMERICAN ASSOCIATION FOR THE HISTORY OF MEDICINE, 51st Annual Meeting, May 12-14, 1976, Flagship Hotel, Galveston; May 15, 1976, Texas Medical Center, Houston. Papers dealing with medicine and the medieval church councils, relationships between midwives and physicians during the Renaissance, depopulation in Polynesia, 19th century pathological theories, public health doctors in Napoleonic France, early 19th century medical education in Egypt, American medical education, medical malpractice in Texas, other topics. Two continuing education courses acceptable for 8 hours credit under Category II, AMA Physician's Recognition Award; AAFP elective. Contact: Dr. Chester R Burns, Institute for the Medical Humanities, UT Medical Branch, Galveston 77550.

CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Fairmont Hotel, Dallas, 2:30-5 pm, May 7, 1976. Meeting with TMA Section on Public Health. Guest speaker is Dr. John F Finklea, Dir, Natl Institute for Occupational Safety and Health, Dept of Health, Education and Welfare, Rockville, Md. Topic will be Medical Surveillance Requirements in OSHA Standards. Contact: Dr. Fratis L Duff, Dir, Tex Dept of Health Resources, 1100 W 49th, Austin 78756.

FLYING PHYSICIANS ASSOCIATION, TEXAS CHAPTER, Fairmont Hotel, Dallas, 9 am-5 pm, May 6, 1976. Joint session with Texas Air-Medics Association. Dr. Robert L Wick, Jr, Assoc Prof of Preventive Medicine, Dept of Preventive Medicine, Ohio State University College of Medicine, Columbus, to speak. Topics: Passenger Response to Airline Cabin Depressurization and In Flight Drug Investigations. Contact: Dr. Lawrence H Wilk, Pres, 1001 Louisiana 203, Corpus Christi 78404.

INSTITUTE FOR THE MEDICAL HUMANITIES OF UT MEDICAL BRANCH, Fourth Symposium on Philosophy and Medicine, Galveston, May 16-18, 1976. Theme: mental health—philosophical perspectives.

Featured speakers include Dr. Chester R Burns, UT Medical Branch; Dr. Alan Donagan, University of Chicago; Dr. Horacio Fabrega, Michigan State University; Dr. Leonard Feldstein, Fordham University, Bronx, NY; Dr. Thomas S Szasz, State University of New York, Syracuse; Dr. Irving Thalberg, University of Illinois; Dr. Stephen Toulmin, University of Chicago; Dr. JH van den Berg, University of Leiden. No registration charge. Contact: Dr. H Tristram Engelhardt, Jr, Institute for the Medical Humanities, UT Medical Branch, Galveston 77550; or Dr. Stuart F Spicker, Dept of Community Medicine and Health Care, The University of Connecticut Health Center, Farmington, Conn 06032.

INTERNATIONAL COLLEGE OF SURGEONS, TEXAS STATE SURGICAL DIVISION, Sheraton-Dallas Hotel, Dallas, 2-4:10 pm, May 6, 1976. Contact: Dr. Casey E Patterson, Pres, 6011 Harry Hines Blvd, Dallas 75235.

TEXAS ACADEMY OF FAMILY PHYSICIANS, Parisian Room, Fairmont Hotel, Dallas, 8:15 am-5 pm, May 6, 1976. Seminar on Renal Diseases. Topics include Proteinuria and Hematuria—Patient Evaluation; Glomerulonephritis; Management of Chronic Renal Failure; others. All guest speakers are members of The University of Texas Medical Branch faculty. Program acceptable for six hours prescribed credit, AAFP. Registration fee, $20. No advance registration. Contact: Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

TEXAS AIR-MEDICS ASSOCIATION, Fairmont Hotel, Dallas, 9 am-5 pm, May 6, 1976. See details, Flying Physicians Association.

TEXAS ASSOCIATION OF HOMES FOR THE AGING, 17th Annual Meeting, Sheraton-Dallas Hotel and Dallas Convention Center, May 18-20, 1976. David Crowley, executive vice-president, American Association of Homes for the Aging, to speak on turning challenges into victories. Special training institute on total patient care plans. Board of directors meeting May 17. Awards luncheon May 19. Contact: Box 15587, Austin 78761.

TEXAS ASSOCIATION OF NEUROLOGICAL SURGEONS, Fairmont Hotel, Dallas, 8 am-4 pm, May 7, 1976; and 2-5 pm, May 8, 1976 (in conjunction with TMA Section on Neurological Surgery, Texas Society of Anesthesiologists). May 8 meeting features Dr. John M Tew, Clinician in Neurosurgery, Mayfield Neurological Institute of Cincinnati, Inc, Cincinnati. Contact: Dr. Earl H Rafes, Pres, 3260 Fannin St, Beaumont 77701.

TEXAS ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Fairmont Hotel, Dallas, 6:30 pm, May 6, 1976. Contact: Dr. Bernard F Rosenblum, Pres, 222 S Campbell St, El Paso 79901.

TEXAS DERMATOLOGICAL SOCIETY, Fairmont Hotel, Dallas, 9 am-noon, May 8, 1976. Guest speaker, Dr. Walter R Nickel, Clinical Prof of Medicine and Pathology; Acting Chmn, Division of Dermatology, University of Calif at San Diego. Three topics to be announced. Contact: Dr. HF Johnson, Pres, 5 Medical Dr, Amarillo 79106.

TEXAS DIABETES ASSOCIATION, Fairmont Hotel, Dallas, 2-4:30 pm, May 6, 1976; and 8:15 am-12:30 pm, May 7, 1976. Dr. Peter H Forsham, Prof of Medicine and Pediatrics, Chief of Endocrinology, Dept of Medicine; Dir, Metabolic Research Unit, University of Calif Hospital, San Francisco, is guest speaker. Contact: Dr. Sherman B Lindsey, Pres, Scott and White Clinic, Temple 76501.

TEXAS HOSPITAL ASSOCIATION, 47th Annual Convention, Dallas Convention Center, May 16-20, 1976. Theme: A Past to Honor; A Future to Mold. Features commercial exhibits, board of trustees meeting, luncheon for house of delegates, past chairman's dinner. Contact: Box 15587, Austin 78761.

TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Sheraton-Dallas Hotel, Dallas, 2-5 pm, May 7, 1976. Speakers include Drs. Charles Ryan, Corporate Medical Dir, Sun Oil Co, Philadelphia, speaking on Interrelationship of HMO Practice and Occupational Medicine (2:30-3 pm); and Carl Zenz, Medical Dir, Allis-Chal-

mers Corporation, Milwaukee, speaking on Physiological Response to Occupational Heat Stress (3:15-3:35 pm). Contact: Dr. Frank J Kelly, Sec-Treas, Box 647, Amarillo 79177.

TEXAS OPHTHALMOLOGICAL ASSOCIATION, Fairmont Hotel, Dallas, 8:30 am, May 7, 1976; and 10 am-noon, May 8, 1976. Meeting jointly with TMA Section on Ophthalmology. Dr. William G Everett, Clinical Assoc Prof of Ophthalmology, University of Pittsburgh School of Medicine, Pittsburgh, will present four 30-40 minute papers, topic selections pending. Contact: Dr. Whitney G Sampson, Pres, 537 W 20th St, Houston 77008.

TEXAS ORTHOPAEDIC ASSOCIATION, Sheraton-Dallas Hotel, Dallas, 8 am-4:30 pm, May 8, 1976. Featured speakers: Drs. Lanny L Johnson, Orthopaedic Surgery, East Lansing, Mich; Robert L Larson, Dir of Athletic Medicine and Orthopedic Consultant, Athletic Dept, University of Oregon, Eugene; G Dean MacEwen, Medical Dir and Surgeon-in-Chief, Alfred I duPont Institute, Wilmington, Del. Topics to be discussed include Reconstruction of the Acetabulum for CDH; The Turco Procedure—A Review of Cases and End Results; Scottish Rite Hospital—Experience with CDH; Patellar Compression Subluxation and Chondromalacia of Patella; Arthography; Arthroscopy—Its Use, Technique and Interpretation. Contact: Dr. E Burke Evans, Pres, UT Medical Branch, Galveston 77550.

TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Fairmont Hotel, Dallas, 9 am, May 7, 1976; and 9 am, May 8, 1976. Joint meeting with TMA Section on Otolaryngology. Dr. Karl M Morgenstein, Clinical Assoc Prof of Otolaryngology, University of Miami School of Medicine, Miami, Fla, featured speaker. Contact: Dr. James L Baldwin, Pres, 712 N Washington, Dallas 75246.

TEXAS RHEUMATISM ASSOCIATION, Sheraton-Dallas Hotel, Dallas, 9 am-5 pm, May 8, 1976. Dr. Gerald P Rodnan, Prof of Medicine and Chief, Division of Rheumatology and Clinical Immunology, Dept of Medicine, University of Pittsburgh School of Medicine, Pittsburgh, to speak on Progressive Systemic Sclerosis—Variants and Pretenders; Dr. Daniel J McCarty, Jr, Prof and Chairman, Dept of Medicine, The Medical College of Wis, Milwaukee, to discuss Clinical Variances of Arthritis Associated with Calcium Pyrosphosphate Crystal Deposition. Contact: Dr. J Donald Smiley, Pres, 5323 Harry Hines, Dallas 75235.

TEXAS SOCIETY OF ANESTHESIOLOGISTS, Fairmont Hotel, Dallas, 2-5 pm, May 8, 1976 (Joint session with TMA Section on Neurological Surgery); and 9 am-noon, May 9, 1976. May 8 session features Dr. Richard G Black, Assistant Dir, University Hospital Pain Clinic, University of Washington School of Medicine, Seattle, speaking on The Chronic Pain Syndrome. Also on program for May 8 is Dr. Herbert A Saltzman, Prof of Medicine; Dir, FG Hall Laboratory for Environmental Research, Duke University Medical Center, Durham, NC, speaking on Oxygenation of Body Tissues. May 9, Dr. Earl F Rose, MD, LLB, Prof of Pathology, Dept of Pathology, The University of Iowa College of Medicine, Iowa City, speaks on Products Liability for the Anesthesiologist. Contact: Dr. Cecil R Glass, Pres, Box 5587, Beaumont 77702.

TEXAS SOCIETY OF PATHOLOGISTS, INC, Fairmont Hotel, Dallas, 9 am-noon, May 9, 1976. Contact: Dr. James C Stinson, Pres, 2401 S 31st, Temple 76501.

TEXAS SOCIETY OF PLASTIC SURGEONS, Sheraton-Dallas Hotel, Dallas, 10 am-5 pm, May 7, 1976; and 9 am-1 pm, May 8, 1976. Three papers to be presented by Dr. Ray A Elliott, Jr, Albany Plastic Surgeons Associated, PC, Albany, NY. Contact: Dr. Jeff R Moore, Pres, Box 3755, Amarillo 79106.

CURRENT NATIONAL MEETINGS

AMERICAN CANCER SOCIETY, Nat'l Conference on Radiation Oncology, San Francisco Hilton and Tower, San Francisco, May 27-29, 1976. Stress on new developments and contributions that radiation oncologists can make in diagnosis, treatment of cancer. Sessions open to all members and students of medical and dental professions. No registration fee. 16 hours, Category I, AMA Physician's Recognition Award; 16 hours, AAFP elective; CME hours, Category II-D, American Osteopathic Association. Contact: Dr. Sidney L Arje, American Cancer Society, 777 Third Ave, New York 10017.

AMERICAN LUNG ASSOCIATION, joint Annual Meeting with American Thoracic Society, Braniff Place Hotel, New Orleans, May 16-19, 1976. Symposium on health effects of oxides of sulfur and sulfates May 17. Panel on newer techniques in diagnosis of pulmonary embolism May 19. Scientific sessions. 238 papers presented. Scientific session on occupational and environmental health. Contact: Helen Jones, American Lung Association, 1740 Broadway, New York 10019.

For other courses and symposiums, see Continuing Education Courses, pp 43-46.

Calendar of Listings

■ Denotes Texas Meetings

MAY

AMERICAN ACADEMY OF MEDICAL DIRECTORS, San Francisco, May 6-7, 1976. Box 949, Alexandria, Va 22313.

■ AMERICAN ASSOCIATION FOR THE HISTORY OF MEDICINE, Galveston, May 12-14, 1976. Dr. Chester R Burns, Institute for the Medical Humanities, UT Medical Branch, Galveston 77550.

AMERICAN CANCER SOCIETY, San Francisco, May 27-29, 1976. 777 3rd Ave, New York 10017.

■ AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS, Dallas, May 10-13, 1976. Dr. Warren H Pearse, Exec Off, 1 E Wacker Dr, Suite 2700, Chicago 60601.

■ AMERICAN COLLEGE OF SURGEONS, NORTH TEXAS CHAPTER, Dallas, May 15, 1976. Dr. RC Jones, Sec, 5323 Harry Hines, Dallas 75235.

AMERICAN LUNG ASSOCIATION, New Orleans, May 16-19, 1976. Helen Jones, American Lung Association, 1740 Broadway, New York 10019.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, McAllen, May 20-23, 1976. Geraldine Midgley, Exec Off, Box 1287, Uvalde 78801.

AMERICAN RED CROSS, Portland, Ore, May 9-12, 1976. Convention Office, American Red Cross, 431 18th St, NW, Washington, DC 20006.

AMERICAN SOCIETY FOR GASTROINTESTINAL ENDOSCOPY, Miami Beach, Fla, May 27-28, 1976. Charles B Slack, Inc, 6900 Grove Rd, Thorofare, NJ 08086.

■ ASSOCIATION OF AMERICAN PHYSICIANS, Texas Chapter, Dallas, May 5, 1976. Dr. George E Holladay, 525 Bryan St, Denton 76201.

CONFERENCE ON AMBULATORY MONITORING, Atlanta, May 20-21, 1976. Nancy Jacobsen, Conference Coordinator, 315 University District Bldg, 1107 NE 45th, Seattle, Wash 98105.

■ CONFERENCE OF CITY AND COUNTY HEALTH OFFICERS, Dallas, May 7, 1976. Dr. Fratis L Duff, Dir, Tex Dept of Health Resources, 1100 W 49th, Austin 78756.

CONFERENCE ON CUTANEOUS TOXICITY, AMERICAN MEDICAL ASSOCIATION, Washington, DC, May 17-18, 1976. Dept of Drugs, AMA, 535 N Dearborn St, Chicago 60610.

■ FLYING PHYSICIANS ASSOCIATION, TEXAS CHAPTER, Dallas, May 6, 1976. Dr. Lawrence H Wilk, Pres, 1001 Louisiana 203, Corpus Christi 78404.

■ INTERNATIONAL COLLEGE OF SURGEONS, TEXAS STATE SURGICAL DIVISION, Dallas, May 6, 1976. Dr. Casey E Patterson, Pres, 6011 Harry Hines Blvd, Dallas 75235.

SOUTHEAST EMERGENCY MEDICINE CONGRESS, Atlanta, May 3-5, 1976. Registrar, 1919 Beachway Rd, Suite 5C, Jacksonville, Fla 32207.

■ SOUTHWEST ALLERGY FORUM, San Antonio, May 22-25, 1976. Dr. Peter B Kamin, 601 Oak Hills Medical Bldg, San Antonio 78229.

■ SOUTHWESTERN SURGICAL CONGRESS, Houston, May 3-6, 1976. Dr. Jack A Barney, Sec-Treas, 708 Physicians & Surgeons Bldg, Oklahoma City 73103.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Dallas, May 6, 1976. Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

■ TEXAS AIR-MEDICS ASSOCIATION, Dallas, May 6, 1976. Dr. Neall O Simpson, 111 S 18th, Waco 76701.

■ TEXAS ASSOCIATION OF NEUROLOGICAL SURGEONS, Dallas, May 7-8, 1976. Dr. Earl H Rafes, Pres, 3260 Fannin St, Beaumont 77701.

■ TEXAS ASSOCIATION OF PUBLIC HEALTH PHYSICIANS, Dallas, May 6, 1976. Dr. Bernard F Rosenblum, Pres, 222 S Campbell St, El Paso 79901.

■ TEXAS DERMATOLOGICAL SOCIETY, Dallas, May 8, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS DIABETES ASSOCIATION, Dallas, May 6-7, 1976. Dr. Sherman B Lindsey, Pres, Scott and White Clinic, Temple 76501.

■ TEXAS HOSPITAL ASSOCIATION, Dallas, May 16-20, 1976. Box 15587, Austin 78761.

■ **TEXAS MEDICAL ASSOCIATION, Annual Session, Dallas, May 6-9, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.**

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Dallas, May 7, 1976. Dr. Frank J Kelly, Sec-Treas, Box 647, Amarillo 79177.

■ TEXAS OPHTHALMOLOGICAL ASSOCIATION, Dallas, May 7-8, 1976. Dr. Whitney G Sampson, Pres, 537 W 20th St, Houston 77008.

■ TEXAS ORTHOPAEDIC ASSOCIATION, Dallas, May 8, 1976. Dr. E Burke Evans, Pres, UT Medical Branch, Galveston 77550.

■ TEXAS OTOLARYNGOLOGICAL ASSOCIATION, Dallas, May 7-8, 1976. Dr. James L Baldwin, Pres, 712 N Washington, Dallas 75246.

■ TEXAS RHEUMATISM ASSOCIATION, Dallas, May 8, 1976. Dr. J Donald Smiley, Pres, 5323 Harry Hines, Dallas 75235.

■ TEXAS SOCIETY OF ANESTHESIOLOGISTS, Dallas, May 8-9, 1976. Dr. Cecil R Glass, Pres, Box 5587, Beaumont 77702.

■ TEXAS SOCIETY OF PATHOLOGISTS, INC, Dallas, May 9, 1976. Iris Wenzel, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS SOCIETY OF PLASTIC SURGEONS, Dallas, May 7-8, 1976. Dr. Jeff R Moore, Pres, Box 3755, Amarillo 79106.

■ UT MEDICAL BRANCH, Symposium on Philosophy and Medicine, Galveston, May 16-18, 1976. Dr. H Tristram Engelhardt, Jr, Institute for the Medical Humanities, UT Medical Branch, Galveston 77550.

JUNE

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Dallas, June, 1976. Dr. CB Shuey, Jr, Sec, 3500 Gaston Ave, Dallas 75246.

■ AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC, Houston, Jun 17-18, 1976, Box 15186, Austin 78761.

■ AMERICAN MEDICAL ASSOCIATION, Dallas, Jun 27-Jul 1, 1976. 535 N Dearborn, Chicago 60610.

AMERICAN SOCIETY OF INTERNAL MEDICINE, San Francisco, Jun 18-19, 1976. 535 Central Tower Bldg, 703 Market St, San Francisco 94103.

AMERICAN SOCIETY OF LAW AND MEDICINE, Boston, Jun 21-23, 1976. Dr. Elliot L Sagall, 454 Brookline Ave, Boston 02215.

CANADIAN ASSOCIATION OF RADIOLOGISTS, Quebec, Jun 12-17, 1976. Suite 806, 1440 St. Catherine St W, Montreal, Quebec H3G 1R8.

EYE RESEARCH INSTITUTE OF RETINA FOUNDATION, Boston, Jun 17-19, 1976. Dr. H MacKenzie Freeman, 20 Staniford St, Boston 02114.

INTERNATIONAL CONGRESS ON GROUP MEDICINE, Paris, Jun 21-26, 1976. Domestic Coordinating Body, American Group Practice Association, 20 S Quaker Lane, Box 949, Alexandria, Va 22313.

■ NUECES COUNTY MEDICAL SOCIETY, Corpus Christi, Jun 10-11, 1976. Box 5280, Corpus Christi 78405.

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Las Vegas, Nev, Jun 13-16, 1976. Dr. Richard H Moiel, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77025.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Houston, Jun 15-17, 1976. Dr. A Bryan Spires, Southwest Tower Bldg, Suite 900, 211 E 7th St, Austin 78701.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 19-22, 1976. Box 456, Sunland Park, NM 88063.

AMERICAN ASSOCIATION FOR REHABILITATION THERAPY, INC, Cleveland, Jul 12-16, 1976. Box 93, N Little Rock, Ark 72116.

AMERICAN CANCER SOCIETY, COLORADO DIVISION, Denver, Jul 16-17, 1976. 1809 E 18th Ave, Denver 80218.

AMERICAN SOCIETY OF ORAL SURGEONS, Chicago, Jul 17-18, 1976. 211 E Chicago Ave, Ste 930, Chicago 60611.

INDIANA UNIVERSITY, Institute for Sex Research, Inc, Bloomington, Ind, Jul 21-30, 1976. 416 Morrison Hall, Indiana University, Bloomington, Ind 47401.

INSTITUTE FOR CONTINUING EDUCATION, Heidelberg/Mainz/Hamburg, W Germany, Jul 13-24, 1976. 2405 Westwood Ave, Box 11083, Richmond, Va 23230.

INTERNATIONAL UROLOGY CONGRESS, Johannesburg, South Africa, Jul 25-30, 1976. c/o Festivals & Conventions Trust (Pty) Ltd, Box 61326, Marshalltown, 2107 Transvaal, Rep of South Africa.

INTERNATIONAL CONGRESS OF HYPNOSIS AND PSYCHOSOMATIC MEDICINE, Philadelphia, Jul 1-3, 1976. Dr. Martin T Orne, The Institute of Pennsylvania Hospital, 111 N 49th St, Philadelphia 19139.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, Colo, Jul 23-24, 1976. 1764 Gilpin St, Denver, Colo 80210.

■ TEXAS REHABILITATION ASSOCIATION, Dallas, Jul 11-14, 1976. Box 20040, Dallas 75220.

AUGUST

■ AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, Houston, Aug 1-6, 1976. 1725 K St, NW, Washington, DC 20006.

AMERICAN ASSOCIATION OF FOUNDATIONS FOR MEDICAL CARE, Boston, Aug 7-12, 1976. Box 230, Stockton, Calif 95201.

■ AMERICAN PODIATRY ASSOCIATION, Dallas, Aug 12-17, 1976. 20 Chevy Chase Circle, NW, Washington, DC 20015.

■ AMERICAN SOCIETY OF PARASITOLOGISTS, San Antonio, Aug 22-27, 1976. UT Health Science Center at Dallas, Dallas 75235.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 8-13, 1976. 1818 Gaylord St, Denver 80206.

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION, Tokyo, Aug 22-28, 1976. c/o Japan Medical Women's Association, 19 Kawadacho, Ichigayan, Shinjuku-ku Tokyo.

TRANSPLANTATION SOCIETY, New York, Aug 22-28, 1976. Felix T Rapaport, New York University Medical Center, 560 First Ave (Room H-438), New York 10016.

SEPTEMBER

AMERICAN ACADEMY FOR CEREBRAL PALSY, Los Angeles, Sep 12-16, 1976. 1255 New Hampshire Ave NW, Room 1030, Washington, DC 20036.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Boston, Sep 20-23, 1976. 1740 W 92nd St, Kansas City, Mo 64114.

■ AMERICAN ACADEMY OF MEDICAL ADMINISTRATORS, Dallas, Sep 19-20, 1976. 6 Beacon St, Boston 02108.

AMERICAN CANCER SOCIETY-NATIONAL CANCER INSTITUTE, St. Louis, Sep 20-22, 1976. Dr. Sidney L Arje, American Cancer Society, 777 Third Ave, New York 10017.

AMERICAN COUNCIL OF MEDICAL STAFFS, New Orleans, Sep 24, 1976. 3422 Bienville St, New Orleans 70119.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Dearborn, Mich, Sep 30-Oct 2, 1976. 4137 Erie St, Willoughby, Ohio 44094.

AMERICAN FRACTURE ASSOCIATION, Acapulco, Mexico, Sep 5-10, 1976. Box 10202, Atlanta 30319.

■ AMERICAN HOSPITAL ASSOCIATION, Dallas, Sep 20-23, 1976. 840 N Lake Shore Dr, Chicago 60611.

AMERICAN PSYCHIATRIC ASSOCIATION, Atlanta, Sep 19-23, 1976. 1700 18th St, NW, Washington, DC 20009.

AMERICAN ROENTGEN RAY SOCIETY, Washington, DC, Sep 18-25, 1976. 20 N Wacker Dr, Chicago 60606.

AMERICAN SOCIETY OF PLASTIC & RECONSTRUCTIVE SURGEONS, Boston, Sep 26-Oct 1, 1976. 29 E Madison St, Ste 807, Chicago 60602.

NATIONAL ASSOCIATION OF NEIGHBORHOOD HEALTH CENTERS, INC, Atlanta, Sep 20-24, 1976. 1625 I St, NW, Ste 403, Washington, DC 20006.

SOCIETY FOR PEDIATRIC RADIOLOGY, Washington, DC, Sep 19-20, 1976. c/o Johns Hopkins Hospital, Baltimore 21205.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Sep 17-19, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS PEDIATRIC SOCIETY, Dallas, Sep 23-25, 1976. Mary E Greene, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES, Houston, Sep 29-Oct 1, 1976. Drs. Sergio Henao and Mae F McMillan, 1300 Moursund Ave, Houston 77030.

OCTOBER

AMERICAN ACADEMY OF PEDIATRICS, Washington, DC, Oct 18-23, 1976. 5320 Pine Ridge Ave, Cheyenne, Wyo 82001.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct 31-Nov 5, 1976. 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tuscon, Ariz, Oct 3-6, 1976. Box 912, DTS, Omaha 68101.

AMERICAN BOARD OF FAMILY PRACTICE, Certification examination, Seven cities throughout the US, Oct 30-31, 1976. Dr. Nicholas J Pisacano, Exec Dir-Sec, University of Kentucky Medical Center, Lexington, Ky 40506.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Atlanta, Oct 24-28, 1976. 911 Busse Highway, Park Ridge, Ill 60068.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, New Orleans, Oct 12-14, 1976. 241 E Saginaw, E Lansing, Mich 48823.

AMERICAN COLLEGE OF GASTROENTEROLOGY, Montreal, Oct 24-30, 1976. 299 Broadway, New York 10007.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct 11-15, 1976. 55 E Erie St, Chicago 60611.

AMERICAN GROUP PRACTICE ASSOCIATION, Bal Harbour, Fla, Oct 5-9, 1976. 20 S Quaker Lane, Alexandria, Va 22313.

AMERICAN MEDICAL ASSOCIATION AUXILIARY, Chicago, October, 1976. 535 N Dearborn St, Chicago, 60610.

■ AMERICAN MEDICAL TENNIS ASSOCIATION, Austin, Lakeway World of Tennis, Oct 16-23, 1976. Box 13, Alton, Ill 62002.

AMERICAN MEDICAL WRITERS ASSOCIATION, Detroit, Oct 6-10, 1976. 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, New Orleans, Oct 7-10, 1976. Box 708, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, San Francisco, Oct 9-13, 1976. 515 Busse Hwy, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Los Angeles, Oct 15-22, 1976. 2100 W Harrison St, Chicago 60612.

■ AMERICAN SOCIETY FOR MICROBIOLOGY, Austin, Oct 6-8, 1976. 1913 I St, NW, Washington, DC 20006.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Washington, DC, Oct 11-13, 1976. 200 Berkeley St, Boston 02117.

■ ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, San Antonio, Oct 31-Nov 4, 1976. 10605 Concord St, Kensington, Md 20795.

GERONTOLOGICAL SOCIETY, New York, Oct 13-17, 1976. 1 Dupont Circle, Ste 520, Washington, DC 20036.

INTERNATIONAL ACADEMY OF PATHOLOGY, Washington, DC, Oct 17-23, 1976. c/o Dept of Pathology, University of Indiana Medical Center, Indianapolis 46202.

INTERNATIONAL CONGRESS OF ALLERGOLOGY, Buenos Aires, October, 1976. Dr. LL Henderson, Sec Gen, Mayo Clinic, Rochester, Minn 55901.

INTERNATIONAL FEDERATION OF GYNECOLOGY & OBSTETRICS, Mexico City, October, 1976. Av Baja California 317-301, Mexico 11 DF, Mexico.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 2, 1976. Box 3276, Amarillo 79106.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Dallas, Oct 17-19, 1976. Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct non-therapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

P·M·A
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
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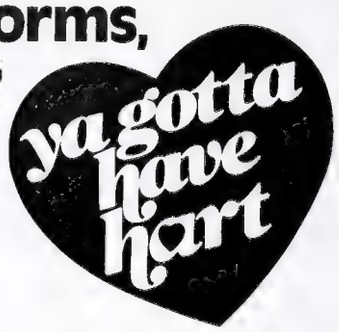

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F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

CHAMPUS APPROVED
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BRIEF SUMMARY OF
PRESCRIBING INFORMATION
ANTIMINTH® (pyrantel pamoate)
ORAL SUSPENSION

Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

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A division of Pfizer Pharmaceuticals
New York, New York 10017

eliminates Pinworms and Roundworms with a single dose

- **Single dose effectiveness against both pinworms and roundworms**— The only single-dose anthelmintic effective against pinworms *and* roundworms.
- **Nonstaining**— to oral mucosa, stomach contents, stools, clothing or linen.
- **Well tolerated** — the most frequently encountered adverse reactions are related to the gastrointestinal tract.
- **Economical** — a single prescription will treat the whole family.
- **Highly acceptable** — pleasant-tasting caramel flavor.
- **Convenient** — just 1 tsp. for every 50 lbs. of body weight. May be taken without regard to meals or time of day.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
New York, New York 10017

Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles

Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material

Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials

Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the Managing Editor and consultants.

News

News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings

Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries

Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns

Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing

All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

Copyright

Texas Medicine is copyrighted by the Texas Medical Association. Written permission from the Managing Editor must be obtained before reproducing, in part or in whole, any material published in *Texas Medicine*.

Point of View

Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

CONTINUING EDUCATION COURSES

MAY

EDITOR'S NOTE: The majority of the programs at the Texas Medical Association's Annual Session in Dallas, May 6-9, 1976, qualify for hour for hour credit under Category I of the American Medical Association Physician's Recognition Award. Section meetings, specialty society programs, special programs and symposia are among the accredited continuing education activities. The AMA, in cooperation with TMA, will conduct six courses Sunday, May 9, 8 am-1 pm, at the Fairmont Hotel. Descriptions of these courses are included in the listings below. Those registered in advance may secure course tickets and registration material at the AMA-TMA Postgraduate Registration Desk, Regency Ballroom Lobby, Fairmont Hotel.

Anesthesiology

Title: 23rd Annual Anesthesiology Review Course
Sponsor: Society of Air Force Anesthesiologists, Lackland AFB
Location of Course: Convention Center, Hemisfair Plaza; Hilton Hotel San Antonio (headquarters)
Dates: May 24-28, 1976
Duration: Continuous, 5 days, 30 total course hours
Fee: $100
Designed For: Specialists in Anesthesiology
Credit: 30 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Dr. Francis J Dannemiller, Program Director, Society of Air Force Anesthesiologists, PSC 8, Box 368865, Lackland AFB 78236

Cardiology

Title: Basic Electrocardiography
Sponsors: Texas Medical Association (Annual Session), American Medical Association
Location of Course: Parisian Room, Fairmont Hotel, Dallas
Date: May 9, 1976
Duration: 5 hours, 8 am-1 pm
Fee: $55
Credit: 5 hours, Category I, AMA Physician's Recognition Award
Contact: Mr. Dale K Jewett, Director, Department of Education Seminars, AMA, 535 N Dearborn, Chicago 60610

Chest Disease

Title: Wheezing—Obstructive Lung Disease in Adults and Children
Sponsors: American College of Chest Physicians, Chicago; Baylor College of Medicine
Location of Course: Texas Children's Hospital, Texas Medical Center, Houston
Dates: May 13-15, 1976
Duration: Continuous, 3 days
Fee: Members, $125; Nonmembers, $125; Residents, $50
Designed For: General practitioners; Specialists in Internal Medicine, Pediatrics, Family Medicine
Enrollment: To be determined
Credit: AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Dermatology

Title: Dermatology for Nondermatologists
Sponsors: Texas Medical Association (Annual Session), American Medical Association
Location of Course: Executive Room, Fairmont Hotel, Dallas
Date: May 9, 1976
Duration: 5 hours, 8 am-1 pm
Fee: $55
Credit: 5 hours, Category I, AMA Physician's Recognition Award
Contact: Mr. Dale K Jewett, Director, Department of Education Seminars, AMA, 535 N Dearborn, Chicago 60610

Emergency Care

Title: Life-Saving Measures for the Critically Injured
Sponsors: Texas Medical Association (Annual Session), American Medical Association
Location of Course: French Room, Fairmont Hotel, Dallas
Date: May 9, 1976
Duration: 5 hours, 8 am-1 pm
Fee: $55
Credit: 5 hours, Category I, AMA Physician's Recognition Award
Contact: Mr. Dale K Jewett, Director, Department of Education Seminars, AMA, 535 N Dearborn, Chicago 60610

Family Medicine

Cancelled: Anesthesia for the Family Physician, UT Health Science Center at San Antonio, May 5-7, 1976

Postponed: Office Gynecology, UT Health Science Center at San Antonio, May 22-23, 1976

General Medicine

Title: Course in Nuclear Medicine—Its Use in Defining Disease
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: UT Health Science Center at Houston
Dates: May 6, 13, 20, & 27, 1976
Duration: Intermittent, 2 hours
Fee: $35

Designed For: Full- or part-time specialists in Nuclear Medicine; Postgraduate traineeship
Credit: AAFP Prescribed; Category I, AMA Physician's Recognition Award; Society of Nuclear Medicine; American College of Radiology; American Society of Clinical Pathologists
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Obstetrics & Gynecology

Title: Office Gynecology
Sponsors: Texas Medical Association (Annual Session), American Medical Association
Location of Course: Far East Room, Fairmont Hotel, Dallas
Date: May 9, 1976
Duration: 5 hours, 8 am-1 pm
Fee: $55
Credit: 5 hours, Category I, AMA Physician's Recognition Award
Contact: Mr. Dale K Jewett, Director, Department of Education Seminars, AMA, 535 N Dearborn, Chicago 60610

Occupational Medicine

Title: Texas Occupational Medical Association Scientific Program
Sponsor: Texas Occupational Medical Association
Location of Course: Fairmont Hotel, Dallas
Date: May 7, 1976
Duration: 1 day, 3 hours
Fee: None
Designed For: Full- or part-time specialists in Occupational Medicine
Teaching Methods: Audiovisual materials, lecture, open question, panel
Contact: Dr. Francis J Kelly, Secretary, Texas Occupational Medical Association, Box 647, Amarillo 79177

Pediatrics

Title: Pediatrics for the Practitioner
Sponsor: UT Health Science Center at San Antonio
Location of Course: St. Anthony Hotel; UT Health Science Center at San Antonio; Santa Rosa Children's Hospital
Dates: May 21-23, 1976
Duration: Continuous, 3 days
Fee: $125
Designed For: General practitioners, Specialists
Enrollment: Maximum, 150
Credit: 13 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, panel
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Physical Medicine and Rehabilitation

Title: Tenth Comprehensive Review Course in Physical Medicine and Rehabilitation
Sponsors: Veterans Administration Hospital, Houston; Baylor College of Medicine, Dept of Physical Medicine, Houston
Location of Course: Auditorium, Texas Woman's University College of Nursing, Houston
Dates: May 17-27, 1976
Duration: Continuous, 10 days, 2 weeks, 8 hours instruction per day, 80 total course hours
Fee: None
Designed For: General practitioners; Specialists
Enrollment: Minimum, 30; Maximum, 100
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, live clinic, seminar
Contact: Dr. William P Blocker, Jr, Chief, Rehabilitation Medicine Service, Veterans Administration Hospital, 2002 Holcombe Blvd, Houston 77211

Psychiatry

Cancelled: WISC-R Workshop, UT Heal Science Center at San Antonio, May 1, 1976

Title: Colloquium in Psychological Diagnosis
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: May 15-16, 1976
Duration: Continuous, 2 days, 5-6 hou instruction per day, 11 total course hours
Fee: $75
Designed For: Specialists
Credit: 11 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, enrollee observes procedure, open question, television
Contact: Dr. Paul Cutler, Assoc Dean f Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 7828

Other: Alcoholism

Title: Workshop on Alcoholism and Dru Abuse: D_x — R_x
Sponsors: Texas Department of Menta Health and Mental Retardation; Baylor College of Medicine, Houston
Location of Course: Kerrville State Hos pital, Kerrville
Date: May 13, 1976
Duration: 1 day
Fee: To be determined
Designed For: General practitioners; Mental health professionals
Teaching Methods: Lecture, discussion
Contact: Office for Medical Services Continuing Education, Texas Department of Mental Health and Mental Retardation, Box 12668, Capitol Station, Austin 78711

ther: Gero-Psychiatry

tle: Side Effects and Implications for se of Neuroleptics in Gero-Psychiatry nd Community Care Aspects of Gero-sychiatric Patients
ponsors: Texas Department of Mental ealth and Mental Retardation; Baylor ollege of Medicine, Houston
ocation of Course: Wichita Falls Coun-y Club, Wichita Falls
ate: Apr 24, 1976
uration: 1 day
ee: To be determined
esigned For: General practitioners; lental health professionals
eaching Methods: Lecture, discussion
ontact: Office for Medical Services ontinuing Education, Texas Depart-nent of Mental Health and Mental Re-ardation, Box 12668, Capitol Station, ustin 78711

)ther

itle: Acid-Base, Fluid and Electrolyte Balance
Sponsors: Texas Medical Association (Annual Session), American Medical As-sociation
Location of Course: Oak Room, Fair-mont Hotel, Dallas
Date: May 9, 1976
Duration: 5 hours, 8 am-1 pm
Fee: $55
Credit: 5 hours, Category I, AMA Physi-cian's Recognition Award
Contact: Mr. Dale K Jewett, Director, Department of Education Seminars, AMA, 535 N Dearborn, Chicago 60610

Title: Antibiotics—The Proper Selection
Sponsors: Texas Medical Association (Annual Session), American Medical As-sociation
Location of Course: Continental Room, Fairmont Hotel, Dallas
Date: May 9, 1976
Duration: 5 hours, 8 am-1 pm
Fee: $55
Credit: 5 hours, Category I, AMA Physician's Recognition Award
Contact: Mr. Dale K Jewett, Director, Department of Education Seminars, AMA, 535 N Dearborn, Chicago 60610

JUNE

EDITOR'S NOTE: The American Medical Association's 125th Annual Convention, scheduled for Jun 26-30, 1976, in Dallas, will offer 57 postgraduate courses. Due to space limitations, TEXAS MEDICINE is able to list only a portion of these. More detailed information is available from the AMA, 535 N Dearborn St, Chicago 60610.

Allergy

Title: Immunotherapy of Allergic Disease
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Dates: Jun 28-29, 1976
Duration: 3 total course hours
Fee: $30
Designed For: General practitioners; Specialists in Allergy
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Anesthesiology

Title: Refresher Course for Recovery Room Nurses
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Nurses
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Basic Sciences: Microbiology & Immunology

Title: Workshop in Immunodiagnosis
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Jun 10-13, 1976
Duration: Continuous, 4 days, 7½ hours instruction per day, 30 total course hours
Fee: $150
Designed For: Specialists
Enrollment: Minimum, 20; Maximum, 50
Credit: 30 hours, AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee observes procedure, laboratory work, lecture, open question
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Cardiovascular Disease

Title: Texas Heart Institute Seventh Annual Symposium: Cardiovascular Diagnosis—1976
Sponsor: Texas Heart Institute, Houston
Location of Course: Texas Children's Hospital Auditorium, Houston
Dates: Jun 3-5, 1976
Duration: Continuous, 17 total course hours; Pre-symposium auscultation clinic (optional), continuous, 3 total course hours

Fee: $75; Auscultation clinic, $35
Designed For: General practitioners; Specialists
Enrollment: Maximum, 275
Credit: 17 hours, AAFP
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel, seminar, television
Contact: Dr. Robert J Hall, Medical Director, Texas Heart Institute, Box 20269, Houston 77025

Title: Cardiology for the Internist
Sponsors: American College of Cardiology; Baylor College of Medicine; Memorial Medical Center of Corpus Christi
Location of Course: Red Carpet Inn, North Padre Island
Dates: Jun 21-24, 1976
Duration: Continuous, 4 days, 5 hours instruction per day, 20 total course hours
Fee: Members, $175; Nonmembers, $200
Designed For: General practitioners; Specialists
Enrollment: Maximum, 150
Credit: 20 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Mary Anne McInerny, Director, Dept of Continuing Education Programs, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014

Title: Basic Electrocardiography
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 3 total course hours
Fee: $30
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Chest Disease

Title: Bronchogenic Carcinoma
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Specialists in Chest Disease
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Critical Care Medicine

Title: Basic Life Support—Cardiopulmonary Resuscitation
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Dates: Jun 26, 1976; Jun 28, 1976; Jun 30, 1976
Duration: 5 total course hours
Fee: $50
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, patient demonstration, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Dermatology

Title: Cutaneous Surgery for the Dermatologist
Sponsor: American Medical Association
Location of Course: UT Southwestern Medical School, Dallas
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Specialists in Dermatology
Enrollment: Maximum, 100
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Emergency Care

Title: Life-Threatening Injuries; Their Emergency Management
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners
Enrollment: Minimum, 50
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, patient demonstration, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Family Medicine

Cancelled: Laboratory Assistance in Medical Practice; UT Health Science Center at San Antonio; Jun 26-27, 1976

General Medicine

Title: Day-to-Day Problems with Diabetes
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Internal Medicine

Title: Total Care of the Burn Patient
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Specialists in Internal Medicine
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Medical Writing

Title: Writing for Scientific Journals
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Enrollee performs procedure, lecture, open question, syllabus provided
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Neurology

Title: Bedside Clinics in Neurology
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Specialists in Neurology
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, patient demonstration, syllabus provided
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Obstetrics & Gynecology

Title: Reproductive Endocrinology
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Dates: Jun 28-30, 1976
Duration: 5 total course hours
Fee: $50
Designed For: General practitioners; Specialists in Obstetrics & Gynecology
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Ophthalmology

Title: Ophthalmoscopy for Non-Ophthalmologists
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Orthopedic Surgery

Title: Primary Treatment of Injuries of the Hand
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: Specialists in Orthopedic Surgery, Plastic Surgery
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
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Psychiatry

Postponed: Sex Counseling by Physicians: Office Management of Common Sexual Problems; UT Health Science Center at San Antonio; June, 1976

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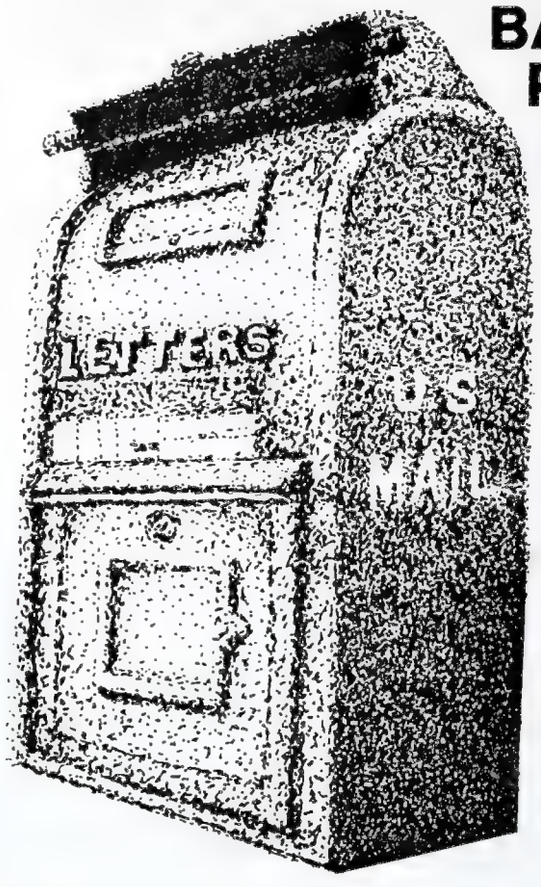

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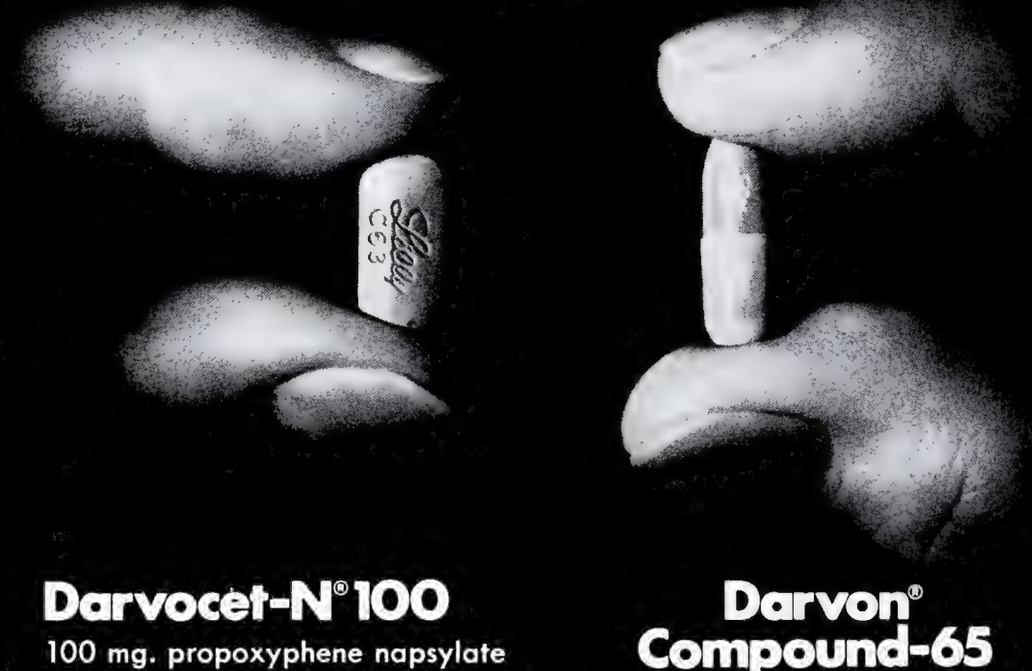

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New developments in our knowledge of gonorrhea; their implications for controlling the disease

John C. Hume, MD, DrPH

While the late 1800's and early 1900's brought much knowledge concerning the bacteriology of gonorrhea and excellent clinical descriptions of the disease and its complications, very little of value had been added to our therapeutic armamentarium or our understanding of the immunology of the disease. My first observations of gonorrhea were in male genitourinary clinics in the pre-sulfonamide era. A typical clinic was a single, large room around two or three walls of which were troughs of running water similar to those still used as urinals in some of our more antiquated men's toilets. High over the trough, at intervals of 76 to 91 cm (2½-3 ft), were receptacles filled with potassium permanganate solution; from each, a rubber tube hung down to an appropriate level. On a busy day, each receptacle was in use by a man who had been given a sterilized glass tube, one end of which was fitted into the rubber tube and the other used for irrigating the urethra. On a table in the center of the room lay a man who has having sounds passed or dorsal slits made. Men lined up awaiting their turns. It was possibly the most revolting and undignified of the clinics operated in those days.

Peoluze, probably the most capable specialist interested in gonorrhea during the last 25-30 years of the pre-penicillin era, claimed that gonorrhea had been better treated by the Arabian School of Medicine under Rhazes, who wrote in approximately 900 AD. Rhazes used instillations of bland substances such as diluted honey, while the 20th century physicians used irritating chemicals and were far more enthusiastic about introducing instruments into the urethra. While probably neither group did much good for their patients with anterior urethritis, the Arabian School at least did little harm.

The advent of the sulfonamides and penicillin did change things considerably, and for a brief period it was believed that with these new agents, it should be possible to control the disease in the population or at least cure the individual and eliminate complications. However, most physicians have considered the disease to be rather distasteful and dull, and investigators have tended to work with organisms that possessed more charm. Fortunately there have always been a few capable, hardy souls who have studied the gonococcus even when funding has been scarce. Their contributions have advanced our knowledge of this unpleasant microbe, and not only have made possible improvements in our methods of treatment and control but lent more scientific excitement to the field and, if you will pardon the expression, sex appeal, to the gonococcus as an object of study.

Some of the more recent findings give promise of improving our management and control measures, or have already led to some progress.

Studies of the Organism

In the first group of developments are those which provide new opportunities for studying the organism itself. Possibly the most significant recent finding was reported by Kellogg and his associates at the Venereal Disease Research Laboratory of the Communicable Disease Center in 1963.[1]

This study demonstrated that there is a relationship between the morphology of colonies of cultured gonococci and their infectiousness for human volunteers. The researchers were able to differentiate the

Presented before the Conference of City and County Health Officers, Texas Medical Association Annual Session, San Antonio, May 2, 1975.

colonies into four groups designated as types 1, 2, 3, and 4. The first two types have sharp borders and are pigmented, convex, and smaller than T3 and T4. T3 is less pigmented, has blurred borders, and is less convex than T1 and T2; T4 is not pigmented, is relatively flat, has blurred margins, and is transparent in comparison to the other three, which are translucent. Types 3 and 4 are seen after repeated nonselective passage on artificial media. Repeated passage of T1 or T2 colonies transferred selectively will result in their predominance. Either T1 or T2, if inoculated into human volunteers, will produce acute gonococcal urethritis, but the others will not. A later study by Kellogg and associates[2] demonstrated that even after three years of maintenance on artificial media and several hundred passages, T1 and T2 retained their virulence for man. This work laid the foundation for several other lines of significant investigation.

One of the great deficiencies in our study of the gonococcus has been the difficulty of working with an animal model. In 1973, Lucas and his coworkers at the Center for Disease Control[3] reported the infection of chimpanzees by the transfer of gonococcal exudate from human males. Later Brown and others[4] demonstrated that gonococcal urethritis could be caused in male chimpanzees by the inoculation of cultivated T1 colonies of *N gonorrhoeae* and that female chimpanzees could be infected by males as a result of sexual intercourse. This does provide an animal model, and while the animal is too difficult to manage and too expensive for widespread use, it does make available a host in which important studies of the immunology of the disease can be carried out.

Meanwhile, in 1972 and 1973, Arko[5,6] successfully inoculated the gonococcus, 90% of the inoculum being colony T1, in subcutaneous chambers of various types implanted in rabbits, guinea pigs, hamsters, mice, and rats. This technique should allow more rapid and intensive study of immune mechanisms in those species.

A third type of animal study has been pursued by Buchanan and Gotschlich[7] at the Rockefeller University, New York. These investigators have successfully inoculated the chorioallantoic membrane of ten-day old chick embryos and recovered the gonococcus 48 hours later from the chorioallantoic fluid. This technique yields more positive cultures when inocula are from T1 and T2 colonies.

Each of these findings has its advantage, but together they should make possible more rapid advances in our knowledge of the immunology and pathogenesis of gonorrhea.

Another group of studies emerging from Kellogg's work deals with the ultrastructure of the gonococcus, and has been pioneered by two groups, Jephcott and associates[8] at the State Serum Institute in Copenhagen, and Swanson and colleagues[9] in New York. Both groups demonstrated pili, hair- or flagella-like extensions from the surface of the cell. These are found primarily if not exclusively on cells from T1 and T2 colonies. The precise role of these extensions in the gonococcus is not known, although in *E coli*, for example, they are hollow, protein tubes and transport DNA from one cell to another. They also are antigenic. The piliated cells are sticky and adherent. This obviously suggests that the pili are related to pathogenicity.

As a result of the foregoing experiments, efforts have been made to use the pili as antigens in serologic tests; results have been promising.[10] Other workers have been studying other serologic tests, phagocytosis, and other immune mechanisms. Also, efforts to elucidate the underlying mechanisms of resistance to antibiotics are under way.

When the virulent strains were identified, Greenberg[11] tried to use autolyzed T1 strains of the gonococcus in a vaccine. This proved to be safe but also, unfor-

tunately, ineffective.[12] Such work will undoubtedly continue and one should not rule out the possibility of success.

Brinton[25] of the University of Pittsburgh, who has been a leading figure in the study of piliated gram-negative bacteria and first applied the name to these structures, recently reported to the American Society for Microbiology on his studies of the gonococcus. He and his colleagues isolated and removed the pili from more than 20 virulent strains of the organism and used this material as an antigen both for detecting antibody in serum of infected patients and to produce antibody in animals and human volunteers. Their preliminary results indicate that the antigen does work successfully in a simple agglutination test, but only after the infection has been present for a week or more. Of even greater interest is the fact that injection of the antigen, which appears to be nontoxic and nonallergenic, does provide a degree of protection estimated to be 60-fold higher than that of the normal controls, although a high enough dose level can overwhelm the immunity.

Control Programs

While the studies cited are exciting, they have not yet led to results immediately transferable to the management of patients or to control programs. There have been, however, several significant developments which are of such a nature. Some of these are the result of many years of work by a whole series of investigators. Possibly the most striking of these is the use of transport media, making culture facilities available to practitioners or clinics without appropriate laboratories of their own. It has long been known that many infected women are asymptomatic and that clinical observation and smears are unreliable diagnostic tools, especially in women. For this reason, efforts have been made to develop media which would "hold" or keep the gonococcus viable long enough to allow a physician in his office to inoculate material and mail it to a laboratory where it could be properly cultured. Certainly such media were tested during World War II and possibly earlier, but were not really feasible on a large scale until recently. The VDRL, after several years of endeavor, reported the development of a transport medium,[12] Transgrow, which is available commercially. Experience with its production has finally led to a remarkably reliable system. According to "Today's VD Control Program, 1975," published by the American Social Health Association, 126 cities were queried on this point; of the 102 replies received, all but seven indicated that city health departments make this service available to their physicians. This should be a great step forward in detecting asymptomatic cases.

A related development has been the large-scale introduction of culture screening programs. Again, this has come about not as the sudden result of a new discovery, but rather as the slow, constant technical improvement of culture techniques, the concern over the increasing gonorrhea rates, the recognized necessity of identifying the large reservoir of asymptomatic cases in the female, and some successful demonstrations of its practicality. This program, in use on a large scale for only about four years, resulted in slightly more than 8 million cultures being performed during a 12-month period ending June 30, 1974. Of these, 4.3% were positive. During the first six months of 1975, 4.3 million women had been screened and 4.4% of them were positive.[13] Prior to the onset of this program, the bulk of cultures were performed in public VD clinics. In fiscal year 1974, however, while the highest positivity rate (19%) was in these clinics, only 780,000 of the 8 million tests performed were done in public clinics. Three times as many were performed by private physicians and of these 1.9% (44,500) were positive. Analyses, by the Venereal Dis-

ease Control Division of CDC, of the sources of the cultures have been made and the numbers involved and positivity rates in those settings not already mentioned range from 11,000 cultures in manpower training agencies with a 6.0% positivity rate, to health department non-VD clinics with nearly 1.5 million cultures and a positivity rate of 3.3%, or hospital outpatient facilities with 1.3 million cultures of which 3.9% were positive. Such efforts to influence the incorporation of gonococcus culturing as a routine, integral component of good medical practice will continue, and undoubtedly increasing emphasis will be placed on screening programs in higher yield settings.

A third related finding concerns asymptomatic gonorrhea in the male. That it occurs has been recognized for a long time, however, its extent has only recently been brought to light. Carpenter and Westphal[14] described the problem in 1940 but it was not until studies in the past decade seemed to indicate a more extensive problem that serious attention was paid to its possible consequences. In 1964, Pariser and Marino[15] reported that in their clinic 10-15% of male contacts of infected females were infected but demonstrated no symptoms, and many maintained their symptomless infections for long periods of time. In 1974, Handsfield and associates[16] reported that, in their clinic, 40% of asymptomatic male contacts of women with symptomatic gonorrhea had positive cultures. The publication, "Today's VD Control Problem-1975," referred to previously, reports that in the Arkansas program among 58 males examined as contacts of women with proven gonorrhea, 30 were positive and, of those found positive, 24 or 80% were asymptomatic. Another group, Portnoy and colleagues in Montreal,[17] reported similar findings: 47% of named male contacts of infected women were positive and, of these, 43% were completely asymptomatic.

In summary then, it does seem clear that, while the majority of males do develop obvious symptoms, there is a smaller group which has either minimal or no signs or symptoms, that some may remain asymptomatic for at least six months,[16] that colonial T1 strains are involved to the same extent as in symptomatic cases,[16] that the strains involved in asymptomatic cases have the same susceptibility to antibiotics as do those in symptomatic cases,[16] and that these asymptomatic males are infectious for women.[16] In the face of this, increasing effort is being expended in the examination of male contacts of infected females.

Managing Patients with Gonorrhea

The next group of findings have more significance perhaps for the management of patients than for gonorrhea control, except for the element of such programs directed at physician education.

For some time after the advent of penicillin, there was a decline in the recognized complications of gonorrhea in both the male and female. Whether the evidence of an upsurge in such complications is the result of the increasing incidence of the disease, inadequate therapy of uncomplicated cases, the emergence of especially virulent strains of the gonococcus, or a combination of these factors is not clear. Whatever the facts may be, it is certainly a most heavy burden, particularly among women, on our society. For example, Rendtorff and his coworkers[18] reported on an estimated 2,367 female patients with past or present complications who were seen in their Memphis outpatient services in 1972. Of these, 729 hospital admissions and 423 surgical procedures were required at a total cost of $873,000. They further estimate that female complications of gonorrhea cost at least $212 million dollars throughout the United States during that same year. They also point out that gonorrhea is the most frequent cause (80%) of pelvic inflammatory disease,

and therefore sterility and ectopic pregnancy, and the basis of over 25% of all gynecologic hospital admissions.

In the past several years greater attention has been paid to these complications in the form of studies, reviews, or a combination of these. The reviews of the complications of gonococcal infection by Kraus[19] and of disseminated gonococcal infection by Holmes and his collaborators[20] cover these subjects well and have excellent bibliographies. Not only do salpingitis, pelvic inflammatory disease, Bartholin's abscesses, prostatitis, epididymitis, and urethral stricture still occur but, as well, the unforgivable entity of ophthalmia neonatorum and other less common, serious complications such as adult ophthalmia, meningitis, peritonitis, perihepatitis, endocarditis, myopericarditis, arthritis, dermatitis, and septicemia. No effort is made to review these; however, it is clear that there are great implications for the practitioner of medicine who must remain alert for these conditions and be certain of his ready access to appropriate laboratory back-up.

There are also two specific points related to complications which are especially significant in their import. First, Handsfield and Holmes[21] recently reported on what they termed a micro-epidemic of virulent gonococcal infections. This episode concerned a male, 22 years of age, who had had in the past nine episodes of symptomatic gonococcal infection, all of them apparently cured by antibiotic therapy, the last being in May 1972. He was seen by the authors on March 1, 1973, when he requested an examination for gonorrhea, even though he was symptomless at that time, stating that he had had mild dysuria and a very scant urethral discharge in December 1972. He was found to have gonorrhea and successfully treated. In January and February he had had intercourse with 10 women. Eight of these were located and examined and seven were found infected. Of these, three had typical disseminated infections with skin and joint involvement, four had salpingitis and pelvic inflammatory disease, and one of this group had skin involvement. Several other studies have shown similar clustering of serious complications among patients with a common contact, and one must speculate as to the probability of the existence of virulent strains. Certainly one should make an extra effort to locate contacts of individuals with serious complications and perform culture studies even if the contacts are symptom-free.

The second point has to do with prenatal or perinatal infection of mothers and infants. It had always been assumed that ophthalmia neonatorum was acquired during the passage of the newborn through the infected birth canal. This probably is the most common mechanism of infection. It has also been accepted that salpingitis and pelvic inflammatory disease are rare during pregnancy and, in general, there had been little evidence adduced indicating that gonococcal infection of the mother during the peripartum period carries with it a serious threat to the life or health of the mother or her offspring. However, recent work has definitely established that puerperal complications are common among mothers with asymptomatic gonococcal infection, up to 32% in one series;[22] ophthalmia neonatorum can occur *in utero* when there has been premature rupture of the membranes;[23] infection with the gonococcus *in utero* can result from the ingestion of infected amniotic fluid with consequent febrile illness of the offspring, and in such cases the gonococcus can be recovered from aspirated gastric fluid;[23] and,

finally, there is some evidence that offspring of infected mothers experience more morbidity and possibly more mortality than offspring of well mothers. Handsfield[24] and his associates at Seattle, for example, have shown in one series of mothers and offspring that, in the 14 offspring from whom gonococci were isolated from orogastric aspirates, rates of "prematurity, prolonged rupture of fetal membranes, associated maternal peripartum fever, histologic chorioamnionitis and a clinical diagnosis of sepsis" were higher than among the 153 infants with no pathogenic organisms in the aspirates. Also, "mothers whose peripartum endocervical, endometrial or placental specimens contained *N gonorrhoeae* had an increased frequency of premature delivery and prolonged rupture of membranes."

Summary

Among the recent findings about the gonococcus and infections with the organism are several, such as the discovery of animal models and the recognition of strains with differing colonial and morphological characteristics related to infectiousness, which give promise of better understanding of the immunology and pathogenesis of the disease and the possibility of improved serologic tests and other diagnostic tools, better understanding of mechanisms of drug resistance, and even a vaccine.

Other technological and clinical developments have already had an impact on control measures and the management of the patient. Among these are (1) improved transport media and systems; (2) increased recognition of the importance of inapparent infections which have given great impetus to widespread screening programs by public and private agencies and private physicians; (3) recognition of the relatively common finding of asymptomatic gonorrhea in the male, especially among contacts of infected women, and the consequent increased emphasis on the location of male contacts and the use of cultures in their examination; (4) recognition of increasing numbers of complications of gonorrhea; (5) the possibility that there are especially virulent strains of the gonococcus which have reemphasized the need for the physician to bear constantly in mind the possibility of gonorrhea as a cause of a variety of conditions and to have ready access to adequate laboratory facilities; and (6) the possible hazards to mother and fetus of gonococcal infection of the mother and the consequent importance of routine culture screening not only of women as a routine part of a careful medical examination but, especially, both early and late in pregnancy.

Dr. Hume, Dean, The Johns Hopkins University, School of Hygiene and Public Health, 615 North Wolfe St, Baltimore, MD 21205.

Reference list available on request from *Texas Medicine*, 1801 N Lamar Blvd, Austin, TX 78701.

*1. Recommended management of gonococcal infections.**

I. Uncomplicated Gonococcal Infections in Adults

A. Treatment Schedules

1. Regimen of Choice: Aqueous procaine penicillin G, 4.8 million units intramuscularly, divided into two or more injections at different sites given at same time, and 1.0 gm of probenecid by mouth immediately preceding the injections.
2. Alternative Regimens
   a. Oral therapy: Ampicillin, 3.5 gm by mouth together with 1.0 gm of probenecid by mouth, administered simultaneously.
   b. Therapy for individuals allergic to the penicillins or probenecid or with previous anaphylactic reactions:
      (1) Tetracycline hydrochloride, by mouth, 1.5 gm initial dose, followed by 0.5 gm four times daily for four days (total dosage 9.5 gm); or
      (2) Spectinomycin hydrochloride, 2.0 gm intramuscularly in single injection.

B. Management of Sexual Partners

Individuals with known recent exposure to gonorrhea should receive the same therapy as those known to be infected. This is true regardless of sex because of the high prevalence of asymptomatic infections in both males and females.

C. Follow-up

Cultures should be obtained from appropriate sites 7-14 days after completion of treatment.

D. Treatment Failures

Most recurrent infection following therapy is due to reinfection and will respond to treatment as outlined. Effort should be made to treat partners at same time. True failures of therapy with penicillin, ampicillin or tetracycline should be treated with 2.0 gm of spectinomycin intramuscularly.

E. Post-Gonococcal Urethritis (Non-Gonococcal)

Treat with tetracycline, 0.5 gm, four times daily by mouth for at least seven days.

II. Pharyngeal Gonococcal Infections

Pharyngeal infections may be less responsive to therapy than anogenital infections. Recommended treatment is 4.8 million units of aqueous procaine penicillin G (APPG) intramuscularly in two or more divided doses given at same time, plus 1.0 gm of probenecid by mouth. (Ampicillin and spectinomycin schedules used in anogenital infections are not effective in pharyngeal infections). Follow-up cultures should be taken 7-14 days after therapy. If infection persists, 9.5 gm of tetracycline, as outlined, should be administered.

III. Uncomplicated Gonorrhea in Pregnant Women

A. Treatment Schedules

1. For pregnant women not allergic to penicillin: APPG plus probenecid or ampicillin plus probenecid as in I-A
2. For pregnant women allergic to penicillin:
   a. Erythromycin, 1.5 gm orally, followed by 0.5 gm orally four times daily for four days for a total of 9.5 gm; (Note: Safe for mother and fetus but efficacy not well established. Erythromycin estolate not safe if underlying liver disease.)
   or
   b. Cefazolin, 2.0 gm intramuscularly, with 1.0 gm probenecid orally; (Note: Possible cross-allergenicity between penicillins and cephalosporins, hence should not be used if patient has history of penicillin-induced anaphylaxis.)
   or
   c. Spectinomycin, 2.0 gm intramuscularly. (Note: Safety for fetus not established.)
   d. Contraindicated: Tetracycline should not be used in pregnant women because of possible toxic effects on mother and fetus.

IV. Acute Salpingitis (Pelvic Inflammatory Disease)

Women with acute lower abdominal pain and adnexal tenderness should receive endocervical cultures and, unless the diagnosis of gonococcal infection is ruled out on reliable criteria, should be treated at once without waiting for results of culture.

A. Hospitalize if:

1. Uncertain diagnosis and need to exclude surgical emergencies;
2. Possibility of pelvic abscess;
3. Patient pregnant and salpingitis possible;
4. Patient cannot maintain outpatient treatment regimen of oral medications because of nausea and vomiting or other problems;
5. Patient fails to respond to outpatient therapy.

B. Antimicrobial therapy

1. Outpatient regimen
   a. Tetracycline hydrochloride, 1.5 gm, by mouth, in single dose followed by 0.5 gm four times a day for four days (total dose 9.5 gm);
   b. APPG 4.8 million units intramuscularly, divided into two or more injections at different sites and 1.0 gm probenecid by mouth immediately preceding injections. Follow with 0.5 gm of ampicillin by mouth four times daily for ten days; or
   c. Ampicillin 3.5 gm by mouth simultaneously with 1.0 gm of probenecid followed by 0.5 gm of ampicillin by mouth four times daily for ten days.
2. Regimen for hospitalized patients
   a. Aqueous crystalline penicillin G, 20 million units intravenously each day until definite improvement, then 0.5 gm of ampicillin by mouth four times daily for a total of ten days of therapy.
   b. Some recommend adding an aminoglycoside, but the necessity or desirability of this is not established.
   c. Tetracycline hydrochloride (in lieu of a and b above) 0.5 gm intravenously four times a day until definite improvement, then 0.5 gm by mouth four times daily for a total of ten days of therapy.
3. Lack of response to the therapy indicates need for reassessment of the diagnosis as regards both the organ or tissue involved and the microbial agent responsible—not an automatic increase in dosage of antibiotics.

C. Management must include examination and appropriate therapy of sex partners. Failure to treat sex partners is a major cause of recurrent gonococcal salpingitis.

D. It is imperative to reexamine patients following completion of therapy, performing pelvic examinations and cultures for N gonorrhoeae.

*Based primarily on treatment schedules recommended by the Center for Disease Control, PHS, DHEW, Atlanta, Ga.

V. Disseminated Gonococcal Infection

A. Treatment of arthritis-dermatitis syndrome

1. Aqueous crystalline penicillin G, 10 million units, intravenously, per day for three days or until definite improvement, followed by ampicillin, 0.5 gm, by mouth four times daily for total of seven days of therapy; or
2. Ampicillin, 3.5 gm, by mouth, plus probenecid, 1.0 gm by mouth simultaneously, followed by ampicillin, 0.5 gm, by mouth, four times daily for at least seven days.

B. In patients allergic to penicillin or probenecid

1. Tetracycline, 1.5 gm, by mouth, followed by 0.5 gm tetracycline four times a day, by mouth, for at least seven days (contraindicated in pregnant women); or
2. Erythromycin, 0.5 gm intravenously every six hours for at least three days.

C. Other measures

1. Hospitalization if patient unreliable, if diagnosis uncertain, or if there are purulent joint effusions or other complications.
2. Apparently immobilization of affected joints is beneficial, as are repeated aspirations and saline irrigations, but these measures not well evaluated. Open drainage of joints other than hip not recommended.
3. Intra-articular injection of penicillin is unnecessary and may be harmful.

D. Gonococcal meningitis and endocarditis require high doses of aqueous crystalline penicillin G, at least 10 million units per day, intravenously, for extended periods: usually at least ten days for meningitis and three to four weeks for endocarditis.

VI. Gonococcal Infection in Pediatric Patients

A. Postpubertal or weighing 45 kg (100 lb) or more: use schedules as for adults.

B. Schedules for prepubertal or those weighing $<$ 45 kg (100 lb) not well evaluated. Presumably APPG, 50,000 units per kg of body weight, intramuscularly, would be adequate for uncomplicated cases in children, however, for infants and very young children see schedules for neonates.

C. Child abuse must be considered in all cases of gonorrhea in children.

VII. Neonatal Infections

A. Prevention

1. Endocervical cultures should be routine part of prenatal care, both early and late in pregnancy.
2. Prevention of ophthalmia neonatorum
   a. Regimen of choice: 1% silver nitrate solution instilled in eyes. (Note: Do not irrigate with saline following instillation since this may reduce efficacy.)
   b. Ointments containing tetracycline, erythromycin, or neomycin are presumably effective but are not regimens of choice.
   c. Not recommended: bacitracin ointment (ineffective) and penicillin drops (sensitizing).

B. Management of Infants Born to Mothers with Gonococcal Infection

1. Diagnosis: orogastric and rectal cultures on all such offspring. Blood cultures if suspected septicemia.
2. Treatment:
   a. If organisms isolated, aqueous crystalline penicillin G, 50,000 units per kg of body weight per day, intravenously in two divided daily doses. Duration determined by clinical response.
   b. If septicemia suspected, the same plus an aminoglycoside.

C. Neonatal Disease

1. Gonococcal Ophthalmia: Hospitalize. Aqueous crystalline penicillin G, 50,000 units per kg of body weight per day, intravenously, in two or three divided doses daily for seven days, plus frequent saline irrigations and eye drops with penicillin, tetracycline, or chloramphenicol.
2. Other Complicated Infections:
   a. Arthritis and septicemia: Hospitalize. Aqueous crystalline penicillin G, 75,000-100,000 units per kg of body weight per day, intravenously for seven days, or procaine penicillin G in same daily doses in two divided doses for seven days.
   b. Meningitis: Hospitalize. Aqueous crystalline penicillin G, 100,000 units per kg of body weight per day, intravenously, in two or three divided doses daily for at least ten days.

VIII. Special Notes

A. No less than doses recommended in schedules should be used in order to prevent treatment failure and the emergence of resistant strains.

B. Long-acting penicillin products such as benzathine penicillin G have no place in the treatment of gonorrhea, although they are quite effective in syphilis.

C. Oral penicillin preparations such as penicillin V are not recommended for the treatment of gonococcal infection.

D. All patients with gonorrhea should receive a serologic test for syphilis at the time of diagnosis.

1. If seronegative and there are no signs of syphilis, those receiving parenteral penicillin as recommended need no follow-up serologic tests, but those treated with other drug schedules outlined should be reexamined and given a serologic test for syphilis in three months.
2. If seropositive or if other clinical evidence of syphilis exists, additional therapy appropriate for syphilis should be administered.

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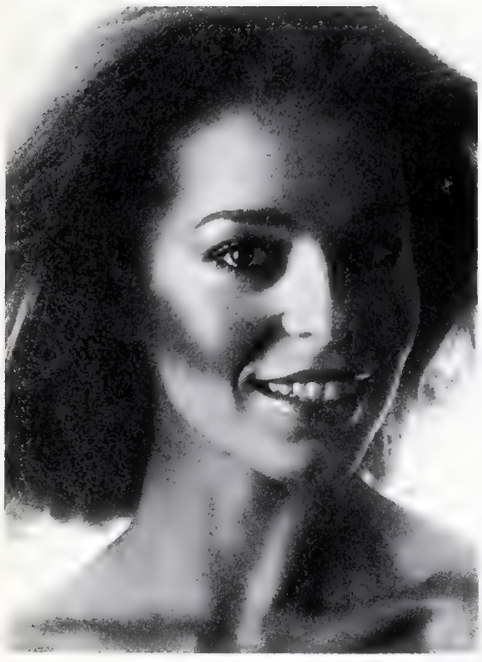

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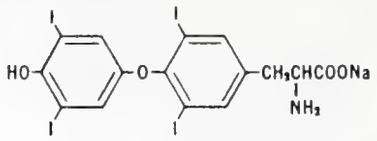

Sodium Levothyroxine

Actions: SYNTHROID (sodium levothyroxine) **Tablets,** taken orally, provide hormone that is readily absorbed from the gastrointestinal tract. SYNTHROID **Injection** is effective by any parenteral route. Following absorption, the synthetic L-thyroxine provided by SYNTHROID products cannot be distinguished from L-thyroxine that is endogenously secreted. Each is bound to the same serum proteins and each exhibits a six to seven day circulating half-life in the euthyroid individual.

Both SYNTHROID products will provide L-thyroxine as a substrate for physiologic deiodination to L-triiodothyronine. Therefore, patients taking SYNTHROID products will demonstrate normal blood levels of L-triiodothyronine even when the thyroid gland has been surgically removed or destroyed by radioiodine. Administration of levothyroxine alone will result in complete physiologic thyroid replacement.

Indications: SYNTHROID (sodium levothyroxine) products serve as specific replacement therapy for reduced or absent thyroid function of any etiology. SYNTHROID **Injection** can be used intravenously whenever a rapid onset of effect is critical, and either intravenously or intramuscularly in hypothyroid patients whenever the oral route is precluded for long periods of time.

Contraindications: There are no absolute contraindications to SYNTHROID (sodium levothyroxine) therapy. Relative contraindications include acute myocardial infarction, uncorrected adrenal insufficiency and thyrotoxicosis. (See WARNINGS)

Warnings: Patients with cardiovascular diseases warrant particularly close attention during the restoration of normal thyroid function by any thyroid drug. In such cases, low initial dosage increased slowly by small increments is indicated. Occasionally, the cardiovascular capacity of the patient is so compromised that the metabolic demands of the normal thyroid state cannot be met. Clinical judgment will then dictate either a less-than-complete restoration of thyroid status or reduction in thyroid dosage.

Endocrine disorders such as diabetes mellitus, adrenal insufficiency (Addison's disease), hypopituitarism and diabetes insipidus are characterized by signs and symptoms which may be diminished in severity or obscured by hypothyroidism. SYNTHROID (sodium levothyroxine) therapy for such patients may aggravate the intensity of previously obscured symptoms and require appropriate adjustment of therapeutic measures directed at these concomitant disorders.

Thyroid replacement may potentiate the effects of anticoagulants. Patients on anticoagulant therapy should have frequent prothrombin determinations when instituting thyroid replacement to gauge the need to reduce anticoagulant dosage.

Precautions: Overdosage with any thyroid drug may produce the signs and symptoms of thyrotoxicosis, but resistance to such factitious thyrotoxicosis is the general rule. With SYNTHROID (sodium levothyroxine) **Tablets,** the relatively slow onset of action minimizes the risk of overdose but close observation in the weeks following institution of a dosage regimen is advised. Treatment of thyroid hyperactivity induced by oral medication is confined to interruption of therapy for a week, followed by reinstitution of daily therapy at an appropriately reduced dosage.

Adverse reactions: Adverse reactions are due to overdose and are those of induced hyperthyroidism.

Dosage and administration: For most adults, a final dosage of 100 mcg (0.1 mg) to 200 mcg (0.2 mg) of SYNTHROID (sodium levothyroxine) **Tablets** daily will restore normal thyroid function and only occasionally will patients require larger doses. Failure to respond adequately to a daily oral intake of 400 mcg (0.4 mg) or more is rare and should prompt reconsideration of the diagnosis of hypothyroidism, special investigation of the patient in terms of malabsorption of L-thyroxine from the gastrointestinal tract or poor adherence to therapy.

The concomitant appearance of other diseases, especially cardiovascular diseases, usually dictates a replacement regimen with initial doses smaller than 100 mcg/day (0.1 mg).

In otherwise healthy adults with relatively recent onset of hypothyroidism, full replacement dose of 150 mcg (0.15 mg) or 200 mcg (0.2 mg) has been instituted immediately without untoward effect and with good therapeutic response. General experience, however, favors a more cautious approach in view of the possible presence of subclinical disorders of the cardiovascular system or endocrinopathies.

The age and general physical condition of the patient as well as the severity and duration of hypothyroid symptoms determine the starting dosage and the rate of incremental dosage increase leading to a final maintenance dosage. In the elderly patient with long standing disease, evidence of myxedematous infiltration and symptomatic, functional or electrocardiographic evidence of cardiovascular dysfunction, the starting dose may be as little as 25 mcg (0.025 mg) per day. Further incremental increases of 25 mcg (0.025 mg) per day may be instituted at three to four week intervals depending on patient response. Conversely, otherwise healthy adults may be started at higher daily dosage and raised to the full replacement dosage in two to three weeks. Clearly it is the physician's judgment of the severity of the disease and close observation of patient response which determines the rate of dosage titration.

Laboratory tests to monitor thyroid replacement therapy are of limited value. Although measurement of normal blood levels of thyroxine in patients on replacement regimens frequently coincides with the clinical impression of normal thyroid status, higher than normal levels on oral replacement of levothyroxine occasionally occur and should not be considered evidence of overdosage per se.

In all cases, clinical impression of the well-being of the patient takes precedence over laboratory determination in determining the appropriate individual dosage.

In infants and children, there is a great urgency to achieve full thyroid replacement because of the critical importance of thyroid hormone in sustaining growth and maturation. Despite the smaller body size the dosage needed to sustain a full rate of growth, development and general thriving is higher in the child than in the adult, as much as 300 mcg (0.3 mg) to 400 mcg (0.4 mg) per day.

In myxedema coma or stupor, without concomitant severe heart disease, 200 to 500 mcg of SYNTHROID **Injection** may be administered intravenously as a solution containing 100 mcg/ml. Although the patient may show evidence of increased responsivity within six to eight hours, full therapeutic effect may not be evident until the following day. An additional 100 to 300 mcg or more may be given on the second day if evidence of significant and progressive improvement has not occurred. Like the oral dosage form, SYNTHROID **Injection** produces a predictable increase in the circulating level of hormone with a long half-time. This usually precludes the need for multiple injections but continued daily administration of lesser amounts intravenously should be maintained until the patient is fully capable of accepting a daily oral dose.

In the presence of concomitant heart disease, the sudden administration of such large doses of L-thyroxine intravenously is clearly not without its cardiovascular risks. Under such circumstances, intravenous therapy should not be undertaken without weighing the alternative risks of the myxedema coma and the cardiovascular disease. Clinical judgment in this situation may dictate smaller intravenous doses of levothyroxine.

SYNTHROID **Injection** by intravenous or intramuscular routes can be substituted for the oral dosage form when ingestion of SYNTHROID **Tablets** is precluded for long periods of time.

How Supplied: SYNTHROID (sodium levothyroxine) **Tablets** are supplied as scored, color-coded compressed tablets in 6 concentrations: 25 mcg (0.025 mg)—orange . . . 50 mcg (0.05 mg)—white . . . 100 mcg (0.1 mg)—yellow . . . 150 mcg (0.15 mg)—blue. . . 200 mcg (0.2 mg)—pink . . . 300 mcg (0.3 mg)—green.

SYNTHROID (sodium levothyroxine) for **Injection** is supplied in 10 ml vials containing 500 mcg of lyophilized active ingredient and 10 mg of Mannitol, U.S.P. A separate 5 ml vial containing Sodium Chloride Injection, U.S.P. is provided as a diluent.

Directions for reconstitution: Reconstitute the lyophilized sodium levothyroxine by aseptically adding 5 ml of the Sodium Chloride Injection, U.S.P. to the vial. Shake vial to insure complete mixing. **Use immediately** after reconstitution. Discard any unused portion.

U.S. Pat. 2,889,363

January 1975

Conjugal asymptomatic neurosyphilis

Donald E. Hazelrigg, MD; W. Christopher Duncan, MD; Andrew H. Rudolph, MD

Two patients with gonorrhea, a man and his wife, were also found to have asymptomatic neurosyphilis. The importance of testing serum to detect syphilis in patients presenting with gonorrhea is emphasized, and the diagnosis and treatment of neurosyphilis is reviewed.

It is well known, but too frequently forgotten, that patients presenting with a single venereal disease may actually have two or more venereal diseases. We report two patients with two simultaneously occurring venereal diseases, and emphasize the importance of identifying the asymptomatic infected sex partner.

Report of Cases

Case 1: In August 1974, a 37-year-old man sought treatment from the Houston City Health Department for a purulent penile discharge. The patient gave a history of a penile sore, followed by a palmar rash, one year earlier. Results of a complete physical examination, including neurological examination, were otherwise normal. Urethral culture on Thayer-Martin agar grew *Neisseria gonorrhoeae*. The serum Venereal Disease Research Laboratory (VDRL) slide test was reactive at a dilution of 1:32, and the fluorescent treponemal antibody absorption test (FTA-ABS) was reactive. Examination of the cerebrospinal fluid (CSF) showed 7 white blood cells, no red blood cells, protein 41.5 mg/100 ml, and a reactive VDRL at a 1:2 dilution. The patient was treated for his syphilis with 2.4 million units of benzathine penicillin G intramuscularly once weekly for three weeks (total 7.2 million units). Gonorrhea therapy consisted of 3.5 gm of ampicillin and 1 gm of probenecid given orally as a single dose.

Case 2: A 35-year-old woman, wife of the patient in case 1, was seen the following day. She was asymptomatic but had had a palmar rash during a recent pregnancy which terminated in a stillbirth. Results of physical examination were unremarkable. A cervical culture on Thayer-Martin agar grew *N gonorrhoeae*. The serum VDRL test was reactive at 1:16 and the fluorescent treponemal antibody absorption test was reactive. CSF examination showed 5 white blood cells, 6 red blood cells, protein 36 mg/100 ml, and VDRL reactive at 1:2. Treatment was the same as that described in case 1.

Comment

Neurosyphilis results when the central nervous system is invaded by *Treponema pallidum*, the etiologic agent of syphilis. This invasion is thought to occur early in the infectious stages, but the involvement is usually asymptomatic and clinical signs and symptoms of neurosyphilis usually do not occur until years after the initial infection.

Symptomatic neurosyphilis is divided into two main groups: (1) meningeal and vascular, and (2) parenchymatous with various combinations possible. Examples of the first group include meningitis, cerebral gumma, and cerebral endarteritis. The parenchymatous group includes tabes dorsalis, dementia paralytica (general paresis of the insane), and optic atrophy. There is evidence that classic forms of neurosyphilis, for example, tabes dorsalis and general paresis, are becoming rare, seemingly to be replaced by atypical forms.[1-3]

Asymptomatic neurosyphilis is defined as the clinical state in which abnormalities are present in the CSF of patients who ex-

hibit no clinical signs or symptoms of infection on neurological examination. It is imperative that the CSF be examined to rule out this form of neurosyphilis in every case of latent (serologically diagnosed) syphilis.

The diagnosis of neurosyphilis is often difficult. Nontreponemal serologic tests for syphilis often are not sensitive enough to detect late syphilis,[4] and technical problems of the lumbar puncture[5] as well as nonsyphilitic causes of CSF changes must be considered.

CSF findings in neurosyphilis include pleocytosis which may be accompanied by elevated protein content and a reactive VDRL slide test. The CSF cell count (normal 0-5 mononuclear cells per cubic milliliter) is the most reliable indicator of activity and therapeutic response.[6,7]

The most widely performed, and currently the most reliable, serologic test on CSF is the VDRL slide test. A reactive test is presumptive evidence of CNS syphilitic involvement; false-positive reactions are rare. However, a nonreactive CSF VDRL does not necessarily prove the absence of syphilis, as the sensitivity may be low. Escobar and others reported that CSF VDRL was reactive in only 22% of patients with clinical neurosyphilis.[8] Treponemal tests on serum are more sensitive than nontreponemal tests, especially in the late stages of syphilis and, thus, the use of treponemal tests on CSF has been recommended by some.[1] Fluorescent treponemal antibody tests have been used for CSF examination and include techniques using undiluted CSF, the CSF fluorescent treponemal antibody test,[8-11] and those using CSF diluted 1:5 with sorbent, the CSF fluorescent treponemal antibody absorption test.[8-12] Fluorescent treponemal antibody tests on CSF are more sensitive than the VDRL spinal fluid slide test. However, the clinical significance of this greater sensitivity remains to be established. Additionally, false-positive results have been reported with the CSF fluorescent treponemal antibody test[8] and further evaluation is necessary to determine their specificity.[8-12] It is probably best to utilize only the VDRL test on CSF for the diagnosis and follow-up of neurosyphilis.

Asymptomatic neurosyphilis, if untreated, may resolve spontaneously, persist as such, or progress into symptomatic neurosyphilis. Penicillin is the drug of choice in all stages of syphilis.

The current treatment recommended by the USPHS[13] for neurosyphilis is benzathine penicillin G, penicillin G procaine in oil with 2% aluminum monostearate (PAM), or aqueous penicillin G procaine, given intramuscularly until a total dosage of 6.0 to 9.0 million units are given. Benzathine penicillin G is given as 2.4 to 3.0 million units at seven-day intervals; PAM is given as 1.2 million units at 3-day intervals; and aqueous procaine penicillin is given as 600,000 units daily. However, this regimen has recently been questioned because of failure to detect penicillin levels in the CSF,[14,15] and dosage schedules as high as 20 million units of penicillin have been recommended.[1]

Alternate antibiotics, eg, tetracycline and erythromycin, while effective in the early infectious stages of syphilis, have not been studied in the late stages as extensively as penicillin. In the penicillin-allergic patient, either antibiotic should be given as 2.0 gm orally daily to a total dose of 50 gm. After penicillin therapy, the incidence of progression of asymptomatic neurosyphilis into active neurosyphilis is extremely low.[16] Nevertheless, follow-up examinations on CSF are mandatory because of a remarkably consistent failure rate of about 10%.[17]

Serologic tests for syphilis should be performed on all patients presenting with a venereal disease, regardless of the type. If the serum is reactive, the CSF should be examined to rule out asymptomatic neurosyphilis. The patient's history, clinical findings, and results of serum tests should all be considered in the interpretation of abnormal findings in the cerebrospinal fluid.

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The authors, Department of Dermatology, Baylor College of Medicine, Houston, Texas 77025.

Reprints not available.

Surgery of the facial nerve (intratemporal)

Michael E. Glasscock, III, MD

This article briefly reviews the evaluation of a patient with peripheral nerve paralysis, as well as indications for surgery. Simple and total decompression techniques are described, and nerve grafts and anastomosis procedures are briefly covered.

Facial paralysis is a disfiguring condition, both physically and emotionally. Modern otologic instrumentation and surgical techniques have made it possible to restore function to the palsied facial nerve in many instances. Indications for surgical treatment of peripheral facial nerve paralysis, as well as the surgical procedures involved, are reviewed.

Indications for Surgery

When a patient has a peripheral facial paralysis, how does the physician decide if surgical intervention is indicated? To answer this question, one must keep in mind the four basic etiologies of a peripheral palsy: trauma, tumor, infection, and idiopathic (Bell's palsy).

Trauma

The increasing number of automobile and motorcycle accidents has in turn produced more injuries to the facial nerve due to temporal bone fractures. In these injuries the nerve may be severed, pinched between a fracture line, or penetrated by a piece of bone spicule. When the onset of the paralysis is immediate and diagnostic studies indicate nerve degeneration, then surgical exploration of the nerve is indicated. In cases where a general anesthetic is hazardous, a local anesthetic may be employed during exploration of the middle ear and mastoid segments. It is sometimes difficult to obtain an accurate history of the immediate onset of paralysis, as the patient may have been unconscious when first seen.

Delayed onset of paralysis after a fracture of the temporal bone indicates that the nerve is intact, and surgical intervention usually is not necessary unless nerve excitability decreases or salivary flow is reduced. Again, it is a problem of having an accurate history. One should base the decision to perform surgery more on the diagnostic studies than on the history.

When there is a "dry" eye on the involved side or there is polytome roentgenologic evidence of a fracture line in or medial to the geniculate ganglion, the labyrinthine segment of nerve should be explored. Intracranial decompression of the labyrinthine segment in some head injuries has to be delayed for several weeks because of edema of the brain.

Iatrogenic injuries to the nerve are treated as any other trauma. Delayed paralysis may be followed and treated as Bell's palsy, but immediate onset requires exploration of the nerve.

Tumor

Any tumor that involves the temporal bone can produce facial paralysis. The palsy may have been produced by the tumor itself or by the surgical removal of the tumor. Function can be returned to the nerve in many instances by rerouting (primary anastomosis) or graft placement. Facial nerve neuromas may occur at any point along the course of the nerve, and with their removal a graft is usually substituted.

Infections

Acute infections of the middle ear or mastoid, or both, with associated facial nerve paralysis usually require some form of surgical intervention. In some instances this may only involve a myringotomy, but when the mastoid is involved, a simple mastoidectomy may be indicated. Usually it is not necessary to decompress the facial nerve.

When facial nerve paralysis occurs in a chronically draining ear with granulations

or cholesteatoma, or both, immediate surgical intervention is indicated. One would certainly be reluctant to open the sheath in the presence of purulent material whether the infection be acute or chronic.

Ramsay Hunt syndrome is generally treated as a Bell's palsy. A "dry" eye requires a middle fossa approach in addition to the simple decompression.

Idiopathic (Bell's Palsy)

The controversy concerning the treatment of idiopathic facial paralysis is long standing and certainly beyond the scope of this presentation. If one is convinced that decompression of the facial nerve is a valid surgical procedure, then there are certain prerequisites and indications that must be met. First there must be a complete and total paralysis of the face. There should be a difference of at least 3 ma between the involved and normal sides on nerve excitability testing.[1]

Salivary flow studies may be done as well. If there is 25% or less on the involved side, this is an indication for decompression.[2] If the patient has a "dry" eye, the middle fossa approach to the labyrinthine segment is employed in addition to the simple decompression.

Surgical Procedures

Modern otologic instrumentation has paved the way for more exciting surgery of the facial nerve. The mallet and chisel have been replaced by high-powered air drills with diamond burrs, and the microscope has made the headlight and loop obsolete. New monofilament suture with atraumatic needles have made primary repairs and grafting of the nerve much more successful. Along with this new instrumentation, advanced surgical technique has opened new vistas in facial nerve surgery.

Decompression of the Facial Nerve

Decompression of the fallopian canal within the temporal bone is the basic procedure for all intratemporal facial nerve surgery, whether the procedure planned is a simple opening of the nerve sheath or placement of a graft.

Simple

The basic surgical exposure of the facial nerve in the temporal bone is the simple decompression procedure. This involves a simple mastoidectomy in which the posterior canal wall is preserved and thinned down. The middle and posterior fossa dural plates are skeletonized, as are the lateral sinus and the sino-dural angle. The course of the facial nerve is outlined by identifying the lateral semicircular canal above and the digastric ridge below. Next the facial recess (a triangle delineated by the chorda tympani nerve, facial nerve, and fossa incudis) is opened and the facial nerve sheath identified. A diamond burr and irrigation suction are used to expose the nerve from the stylomastoid foramen to the area of the processus cochleariformis. The eggshell bone over the nerve sheath is removed with a blunt instrument from three sides of the nerve. Should the sheath be opened, a disposable iridectomy blade is used, inserting the blade in the direction of the nerve fibers.

Total

A total decompression of the facial nerve implies exposing the nerve from the brainstem to the stylomastoid foramen. There are two methods of uncapping the labyrinthine segment of the nerve and exposing the internal auditory canal. These are the middle fossa and translabyrinthine procedures. The choice of techniques simply depends upon whether there is hearing pre-

sent in the involved ear. In some fracture cases, for instance, the ear may be anacoustic.

Middle Fossa Approach

This portion of the procedure may be performed before or after the simple decompression. Some surgeons prefer to do the mastoid portion first so they can put a small hole through the tegmen next to the superior semicircular canal.[3] This simply makes identification of the canal easier when the floor of the middle fossa is exposed.

The approach itself is performed by creating a bone flap in the squamous portion of the temporal bone.[4,5] The dura and the temporal bone are elevated and held out of the operative field by a self-retaining House-Urban retractor. Once the floor of the middle fossa has been exposed, the greater superficial nerve is identified and followed back to the geniculate ganglion. The tegmen tympani is removed with a diamond burr to expose the attic. Care must be taken not to allow the burr to touch either the malleus head or body of the incus. A small diamond burr is used to produce an eggshell effect on the fallopian canal from the geniculate ganglion to the processus cochleariformis. This bone is removed with a blunt instrument. Next, a blue line is made on the superior semicircular canal and the nerve is followed medially into the internal auditory canal. The bone is removed from three sides of the nerve in its labyrinthine segment. A small piece of temporalis muscle is placed over the open internal auditory canal to prevent postoperative cerebrospinal fluid leak.

Translabyrinthine Approach

When there is no useful hearing, the translabyrinthine approach is an excellent method for exposing the labyrinthine segment of the facial nerve.[3] Once the simple decompression has been performed, the labyrinth is removed by systematically drilling away the three semicircular canals. The internal auditory canal is outlined with the diamond burr. The incus is removed and the nerve is followed from the processus cochleariformis to the geniculate ganglion. Next, the vertical bar of bone separating the facial and superior vestibular nerves is identified in the lateral extent of the internal auditory canal and the superior vestibular nerve is reflected posteriorly. This exposes the facial nerve as it exits the internal auditory canal. The nerve is followed with the diamond burr up to the geniculate ganglion. Again, bone is removed from three sides of the nerve. A piece of temporalis muscle is placed over the open internal auditory canal to prevent a postoperative fluid leak.

Grafting

When there is loss of continuity in the facial nerve, either from a fracture or tumor removal, the gap can be spanned by placing a graft between the two cut ends.[6] The most commonly used nerve is the greater auricular. It is about the same size as the facial nerve and is readily obtained from the neck on the involved side. Many times it is possible to approximate the graft with small sutures, but by and large this is unnecessary in the temporal bone. Usually the graft is put into place in the fallopian canal and held with Gelfoam. Grafts up to 1.5 and 2 cm are employed with quite good results. Grafts have been successfully placed from the brain stem to the internal auditory canal, but this requires suboccipital exposure of the posterior fossa in order to obtain sufficient maneuvering space for placing sutures.

Anastomosis

In some instances it is possible to reroute the nerve through the middle ear and perform an end-to-end anastomosis.[7] Most surgeons prefer to graft rather than to reroute the nerve. However, there are certain situations in which extensive destruction to the nerve has occurred and a graft procedure would be prohibitively long. One situation lends itself especially well to end-to-end anastomosis: when a large amount of

nerve tissue in the middle ear and labyrinthine segments has been destroyed, the nerve can be anastomosed from the internal auditory canal to the mastoid segment with amazingly little tension on the suture line.

When it is impractical to graft or to perform an end-to-end anastomosis, the facial nerve may be sutured to another motor nerve. This usually involves using the hypoglossal or spinal accessory nerves. The proximal end of the hypoglossal nerve is sutured to the distal end of the facial nerve. The facial nerve can be removed from the fallopian canal to give more length and prevent tension on the suture line. At least four sutures can be placed through the sheath of each nerve. The hypoglossal nerve is usually the one of choice as the resulting neurological deficit is less troublesome to the patient than loss of the spinal accessory nerve.

Discussion

Any patient presenting with a peripheral facial paralysis should have a thorough neuro-otologic evaluation. This should consist of an accurate history; ear, nose, and throat examination; neurologic, audiometric, and vestibular studies; and roentgenograms of the temporal bone. Polytome roentgenograms have made it possible to detect fracture lines in the temporal bone that have been missed on routine films.

In addition, nerve excitability or salivary flow studies, or both, should be performed. These nerve diagnostic studies have made determination of nerve degeneration more accurate. While not totally accurate, topographic site of lesion studies are helpful in evaluating the need for total decompression. Only after such an examination should the diagnosis of idiopathic facial paralysis be made. There are very definite and valid indications for surgery of the facial nerve which should be stringently adhered to.

It is unfortunate that the controversy concerning the treatment of Bell's palsy has been long and sometimes bitter. This situation has led to a great deal of misunderstanding in the general medical community concerning facial paralysis. The term "Bell's palsy" is still used rather loosely by most physicians to describe any patient with peripheral facial weakness. This general attitude, coupled with the continuing battle in the literature over idiopathic facial paralysis, has left many physicians confused about any type of facial nerve surgery.

This situation will persist until otolaryngologists make a concerted effort to disseminate information about facial nerve surgery to their colleagues. Certainly, the neurosurgeon is the first to see head injuries in which temporal bone fractures are involved. Neurologists and internists see most cases of Bell's palsy long before the otolaryngologist does.

Many physicians are unfamiliar with the modern diagnostic test used in the evaluation of a patient with a peripheral facial paralysis, and are not acquainted with the sophisticated surgical procedures available.

This is not a condemnation of the general medical community but of the otolaryngologists; more articles dealing with the facial nerve should be published in non-otolaryngology journals. Certainly, in this day of continuing education and access to many media, it is unfortunate that any patient should have to go through life with a facial paralysis due to a temporal bone fracture or an undetected facial nerve neuroma.

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Dr. Glasscock, Assistant Clinical Professor of Surgery (Otology and Neuro-otology), Vanderbilt University, Nashville, Tenn.

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Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

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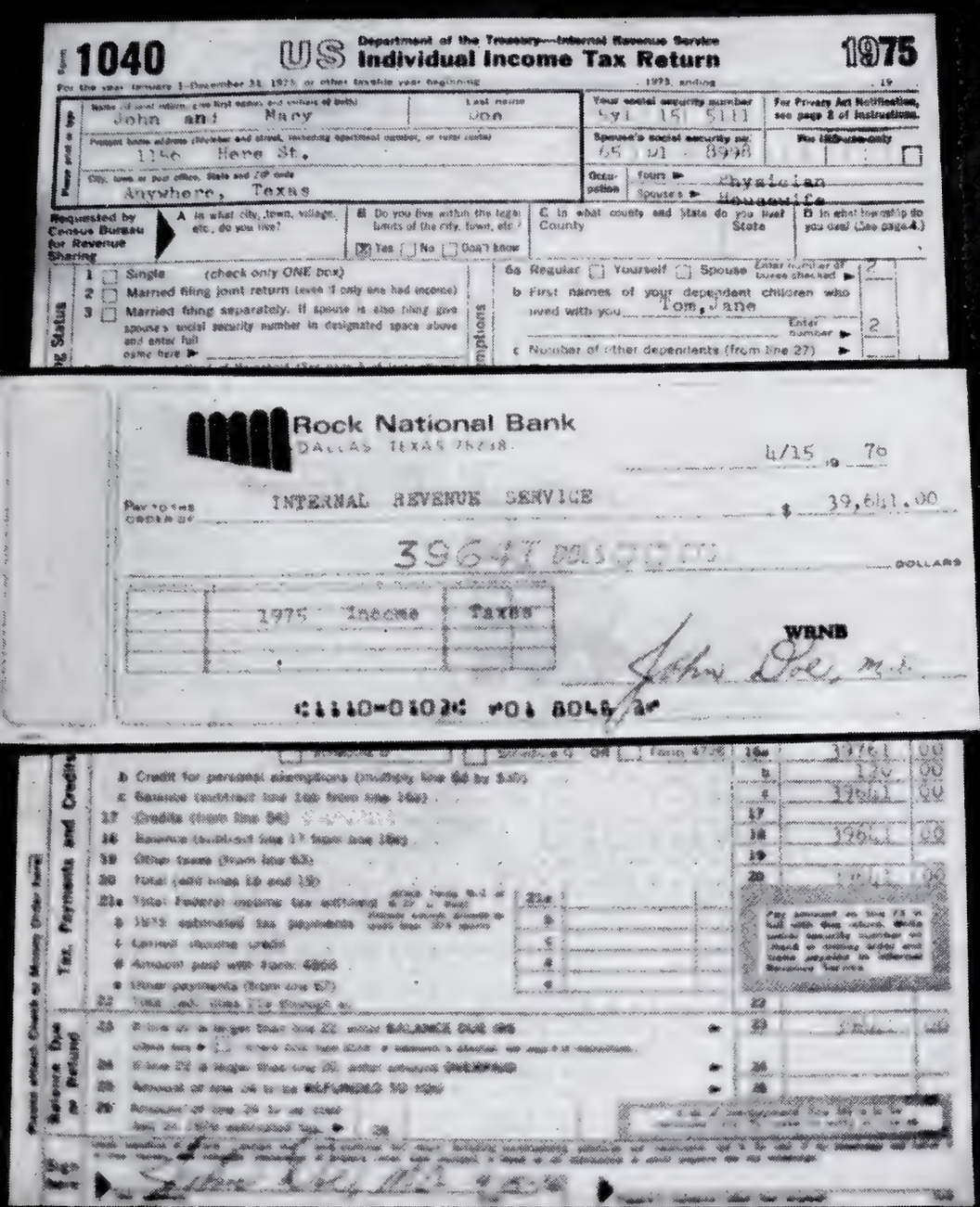

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Calcareous renal calculi: current medical treatment

Charles Y. C. Pak, MD

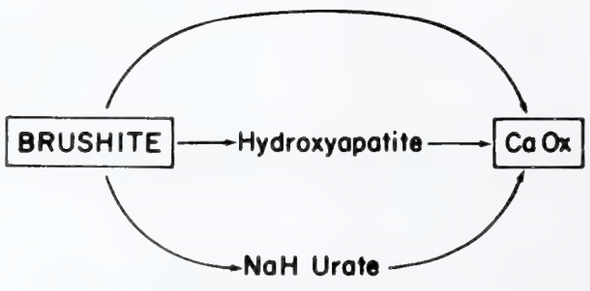
We have progressed considerably toward understanding the physical chemistry of the formation of calcium-containing renal stones, and toward delineating metabolic defects that increase susceptibility to nephrolithiasis. These advances have provided the background for the formulation of a rational mode of therapy, whereby the response to therapy may be quantitated in physicochemical terms and the treatment is directed at correcting the underlying metabolic defect. We shall first consider briefly the physicochemical factors concerned with stone formation. We shall then discuss the diagnostic criteria for the various causes of nephrolithiasis. Finally, we shall evaluate indications, mode of action, and potential hazards of various medical regimens that have been recommended for the control of stone formation.

Physical Chemistry of Stone Formation

Renal stones probably form by nucleation of the crystal nidus from a supersaturated solution,[1,2] followed by the growth of the nidus through processes of crystal growth,[3-5] epitaxial growth,[6-8] and crystal aggregation.[9,10]

Reliable techniques have now been developed to quantitate these processes; for example, the activity product ratio indicates the state of saturation,[11] and the formation product ratio expresses the limit of metastability or the lowest supersaturated state at which nucleation is initiated.[12]

1. Brushite theory for stone formations.



The crystal nidus may form spontaneously when the activity product ratio exceeds the formation product ratio.[13] It may be facilitated in the presence of a calcifiable matrix or by heterogenous nucleation.[14] Three types of heterogenous nucleation of calcium oxalate have been recognized (Fig 1). Brushite, the crystal constituent most commonly formed from urine by spontaneous precipitation[12] or under the influence of an organic matrix,[2] may directly cause crystalline overgrowth of calcium oxalate.[13] Alternatively, the brushite nidus may be transformed to hydroxyapatite (at pH $>$ 6.9)[12] or cause crystalline overgrowth of monosodium urate.[14] Hydroxyapatite or monosodium urate so formed would then induce heterogenous nucleation of calcium oxalate.[14] Once the crystal nidus has formed, it may grow into a macroscopic stone by the process of crystal growth or aggregation.

An essential requirement for nucleation and subsequent growth of stone is the supersaturated state of urine with respect to stone constituents. This requirement has been satisfied for stones of calcium phosphate or calcium oxlalate. In our experience, urine samples from patients with stones were usually supersaturated with respect to brushite[11] and calcium oxalate,[15] whereas they were frequently undersaturated among control subjects.

Diagnostic Considerations

If the diagnosis of calcium stones is probable or confirmed, a search should be undertaken to discern the underlying metabolic defects. Our own effort so far has

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been concerned principally with the delineation of causes and diagnostic criteria for hypercalciurias.[16,17] For this reason, this article considers the situation in the absence of hyperoxaluria or of urinary tract infection with urea-splitting organisms.

Three major causes of hypercalciuria have been recognized.[16,17] In *resorptive hypercalciuria* of primary hyperparathyroidism, the hypercalciuria results from the combined effects of excessive skeletal resorption and enhanced intestinal calcium absorption (which is frequently, but not always, encountered). The consequent increase in the renal filtered load of calcium accounts for the hypercalciuria. In *absorptive hypercalciuria,* the primary abnormality is the excessive intestinal absorption of calcium. The increase in the plasma concentration of calcium, resulting from the intestinal hyperabsorption of calcium, raises the renal filtered load of calcium and suppresses parathyroid function, leading to hypercalciuria. Parathyroid function is normal or suppressed and bone is "spared." In *renal hypercalciuria,* the hypercalciuria is the result of primary reduction in the renal tubular reabsorption of calcium. The reduction in the plasma concentration of calcium, resulting from the primary renal loss of calcium, stimulates parathyroid function. In contrast to findings in primary hyperparathyroidism, the plasma concentration of calcium is not elevated in renal hypercalciuria, and the hyperparathyroidism is probably secondary. There may be bone disease. Renal hypercalciuria may be caused by renal tubular acidosis, hypoparathyroidism (treated), and/or adrenocorticosteroid excess. The majority of patients with illness previously diagnosed as idiopathic hypercalciuria probably suffer from either absorptive or renal hypercalciuria. Essential features of these conditions are presented in Figs 2-4.

Another cause for calcium stones is *normocalciuric nephrolithiasis,*[16] in which the formation of calcium stones is associated with normocalciuria. This condition is probably a result of at least two separate disorders.[15] In one, there is an exaggerated renal excretion of calcium following a high oral calcium load,[17] even though the 24-hour urinary calcium level when the patient is on a calcium-restricted diet is normal. This group constitutes the variant of absorptive hypercalciuria. In the second group are patients with hyperuricosuria who form calcium stones despite normocalciuria.[18] The renal stone formation has been ascribed to the heterogenous nucleation of calcium salts by monosodium urate.[14]

We suggest the following steps in evaluating patients with calcium stones (Fig 5). The provisional diagnosis of hypercalciuria or hyperuricosuria may be made on the basis of a urine sample collected while the patient is on a random diet. The patient is then asked to follow a low calcium diet (avoidance of dairy products) for one week. After this dietary preparation, a liquid synthetic dietary regimen is prescribed for three days (Calcitest Diet, Doyle Pharmaceutical Co., providing 400 mg calcium, 800 mg phosphorous, and 100 mEq sodium daily). During this period, endogenous creatinine clearance and parathyroid function (serum parathyroid hormone and urinary cyclic adenosine monophosphate, if available) may be measured. The determination of urinary calcium levels produced on this constant dietary regimen not only provides a measure of the severity of hypercalciuria, but also allows the diagnosis of normocalciuric nephrolithiasis. If urinary calcium exceeds the intake of 400 mg/day, the diag-

nosis of absorptive hypercalciuria is virtually excluded.

The Calcitest Diet regimen also prepares patients for the simple test for the differentiation of hypercalciurias.[17] This test involves the collection of a two-hour urine sample following an overnight fast, and of a four-hour urine sample after an ingestion of a 1-gm calcium load. In primary hyperparathyroidism, typical features are high fasting urinary calcium levels and high urinary cyclic adenosine monophosphate levels following calcium load. In absorptive hypercalciuria (including the variant), urinary calcium levels are normal during fast, but are significantly higher than normal following an oral calcium load. In renal hypercalciuria, both urinary calcium and cyclic adenosine monophosphate levels are high during fast. However, urinary cyclic adenosine monophosphate decreases toward normal following an oral calcium load.

Treatment of Nephrolithiasis

Ideally, treatment should be directed at correcting the underlying metabolic disorder.[15] Unfortunately, certain drugs are unavailable except on an investigational basis. Further, for many drugs, the chronic toxicology data, mechanism of action, and efficacy have not been adequately or fully established. Much more work needs to be done before the optimal therapy can be clearly delineated. Despite these limitations, we wish to present the following recommendations for therapy:

1. Resorptive Hypercalciuria

The treatment of choice for nephrolithiasis associated with primary hyperparathyroidism is the surgical removal of abnormal parathyroid tissue. Following parathyroidectomy, urinary calcium[19] and the state of saturation with respect to brushite decrease, and stone formation usually ceases. In postmenopausal women with primary hyperparathyroidism, in whom parathyroid exploration is contraindicated, estrogen therapy (estradiol, 0.05 mg/day orally for 20 days each month) may decrease urinary calcium levels and inhibit renal stone formation.[20] However, thiazide may exacerbate hypercalcemia,[21] and orthophosphate may cause extraskeletal calcification.[22]

2. Absorptive Hypercalciuria

Patients should first be provided with a low calcium diet (avoidance of dairy products) and an adequate fluid intake sufficient to yield a urine volume of at least 2 liters/day. If such a regimen fails to lower urinary calcium levels or alter formation of renal stones, a more specific therapy is indicated. The ideal therapy is sodium cel-

2. Resorptive hypercalciuria (primary hyperparathyroidism).

1. May be associated with bone disease, renal stones, peptic ulceration, hypertension
2. Usually high serum PTH and urinary cyclic AMP
   a. Urinary cyclic AMP remains high following oral Ca load
3. Usually high serum Ca and low P
4. Usually negative Ca balance (high fasting urinary Ca, $Ca_{UV} > Ca_A$)
5. Low bone density

3. Absorptive hypercalciuria.

1. Associated with renal stones, but not bone disease
2. Intestinal hyperabsorption of calcium: An exaggerated urinary Ca following Ca oral load
3. Normal serum Ca and P
4. Normal or low serum PTH and urinary cAMP
5. Normal fasting urinary Ca; $Ca_{UV} < Ca_A$
6. Normal bone density

lulose phosphate,[23] a nonabsorbable cation-exchange resin, which may specifically correct the intestinal hyperabsorption of calcium, the primary abnormality of this condition. When given orally at a dosage of 5 gm with meals, this drug has been shown to reduce urinary calcium and to lower the urinary activity product ratio of brushite from supersaturation toward undersaturation.[24] Commensurate with these changes, inhibition of stone formation has been reported.[24] Parathyroid function may be stimulated, but is maintained within the normal range. Since sodium cellulose phosphate acts by limiting the dietary pool of calcium, it is not effective in patients who cannot adhere to a low calcium diet. It is contraindicated in hyperparathyroidism and in states of normal or low intestinal calcium absorption, as it may overly stimulate parathyroid function.

Since sodium cellulose phosphate is available only on an investigational basis, thiazide diuretic (hydrochlorothiazide, 50 mg twice a day orally, or equivalent amount of analogs) and orthophosphate (1.5 gm or more of inorganic phosphorus/day orally) have been customarily used to treat absorptive hypercalciuria. Both drugs lower urinary calcium,[25,26] and probably increase renal excretion of inhibitors of crystallization.[26] Therefore, orthophosphate increases the formation product ratio of brushite in urine,[25] indicating an inhibition of brushite nucleation. Thiazide diuretic may decrease the urinary state of saturation with respect to brushite and calcium oxalate, and may inhibit nucleation and growth of brushite and calcium oxalate.[26] Both drugs have been reported to be effective in the control of stone formation.[27,28] Unfortunately, these drugs do not correct the underlying abnormality in absorptive hypercalciuria, since they do not specifically inhibit intestinal hyperabsorption of calcium. Further, their effects on calcium metabolism and parathyroid function are not fully understood. It is reassuring that therapy with orthophosphate in normocalcemic subjects with renal stones has not been associated with significant side effects,[27] although at high dosages, stimulation of parathyroid function and extraskeletal calcification[22] have been reported.

4. Renal hypercalciuria.

1. Associated with renal stones; patient may have bone disease
2. Secondary hyperparathyroidism:
   a. High or high normal serum PTH and urinary cyclic AMP
   b. Normal serum Ca and P
   c. Urinary cyclic AMP normal following oral Ca load
3. High fasting urinary Ca; usually $Ca_{UV} > Ca_A$
4. May have low bone density

Abbreviations

AMP: adenosine monophosphate
Ca: calcium
Ca_A: calcium, absorption
cAMP: cyclic adenosine monophosphate
Ca_{UV}: Calcium, urinary volume
P: phosphorus
PTH: parathyroid hormone

5. Evaluation of calcium stones.

1. X-ray, stone analysis (identification of Ca stones)
2. 24-hr urine on a random diet:
   a. Ca > 250 mg/day (probable hypercalciuria)
   b. Uric acid > 600 mg/day (hyperuricosuria)
3. Low Ca diet for 1 week; then
4. Standard liquid synthetic diet for 2-3 days: Urinary Ca > 20 mg/day (hypercalciuria)
5. Fasting urinary Ca and Ca load (differentiation of hypercalciurias)

3. Renal Hypercalciuria

In renal hypercalciuria, thiazide diuretic may correct the "renal leak" of calcium.[29] Thus, both the hypercalciuria and secondary hyperparathyroidism may be reversed. In our preliminary study, the intestinal hyperabsorption of calcium, which is sometimes encountered in this condition, may also be restored. The customary dosage of hydrochlorothiazide is 50 mg twice a day orally, or an equivalent amount of analogs. If allergic reaction to thiazide develops, chlorthalidone, 100 mg every other day, may be effective.

4. Normocalciuric Nephrolithiasis with Hyperuricosuria

Calcium stones may form in patients with hyperuricosuria who present no obvious abnormalities of calcium metabolism such as hypercalciuria. The frequency of stone formation was reported to decrease when the renal excretion of uric acid was lowered by allopurinol.[18] This positive clinical response has been attributed to inhibition of the heterogenous nucleation of calcium salts by monosodium urate.[14] However, the effects of allopurinol therapy on the nucleation of monosodium urate and on the crystallization of calcium salts in urine have not yet been examined. Nevertheless, because of the favorable clinical response which may be attained,[18] the use of allopurinol (at a dosage of 100 mg twice a day orally) in patients with normocalciuric nephrolithiasis and hyperuricosuria is probably justified. It is probably much less effective among patients with hyperuricosuria who suffer from other underlying causes for calcium stones, such as hypercalciuria. The efficacy of combined therapy, for example, allopurinol and thiazides in patients with hypercalciuria and hyperuricosuria, has not yet been established.

5. Other Modes of Therapy

Diphosphonate (EHDP), a synthetic analog of pyrophosphate, has been shown to inhibit nucleation, crystal growth and crystal aggregation of brushite and calcium oxalate,[3,30,31] and to prevent the heterogenous nucleation of calcium oxalate by monosodium urate.[15] Although EHDP has been shown to be effective in preventing new stone formation in preliminary clinical trials,[31] this drug has the potential hazard of inhibiting mineralization of bone.

Magnesium oxide has been shown to be useful in the control of calcium oxalate lithiasis. Unfortunately, the effect of magnesium on the solubility, nucleation, and growth of calcium oxalate has not yet been fully established.

This recommendation for therapy is admittedly preliminary, although it is aimed at correcting the basic metabolic abnormality leading to stone formation. We hope that a rational mode of therapy can be eventually established, as further progress is made concerning mechanism of drug action, metabolic setting leading to stone formation, and clinical efficacy in controlled trials.

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Preoperative and postoperative assessment of bronchogenic carcinoma

David R. Sanderson, MD

Bronchogenic carcinoma is a major public health problem. Surgical resection of localized, noninvasive, or stage I cancers offers the best hope for successful management, but early detection is not often accomplished. A high index of suspicion, identification of high-risk populations, and aggressive applications of roentgenographic examinations and sputum cytologic testing offer the best chance for detection at a favorable stage. Optimal application of currently available methods offers the prospect of increasing long-term survivorship among patients with lung cancer.

Bronchogenic carcinoma is the leading cause of death from malignancy in the United States today. Estimates from the American Cancer Society indicated that in 1975 more that 91,000 new cases would occur and that there would be over 81,000 deaths.[1] While the overall survival rate from bronchogenic carcinoma is depressingly low, certain features of the disease may be accompanied by greatly improved prognosis. The outlook for prolonged survival may be much improved[2] if the pulmonary neoplasm is discovered in an asymptomatic person, if the lesion is small (less than 3 cm), if the lesion is surrounded by normal lung tissue, if the bronchial wall is not invaded, and if lymph nodes are not involved at the time of treatment.

Until there are improved chemotherapeutic agents, or until immunotherapy or other new modalities for treatment prove effective, surgical resection remains the most effective treatment for patients with lung cancer. Therefore, the primary care physician and the chest specialist should identify patients who have potentially curable lung cancer and offer them surgical treatment at a stage when the chance for success is more favorable.

Unfortunately, patients susceptible to lung cancer are in an age group that shares increased risk from other smoking-related illnesses and the consequences of aging. Coexistent chronic obstructive lung disease, bronchitis and emphysema, and cardiovascular disease often make pulmonary resection more hazardous or even prohibitive. Obviously, these problems must be considered and treated, too, if pulmonary resection is to be successful.

If a patient presents with symptoms, attention naturally will be focused on the symptoms, but other nonpulmonary ailments also must be evaluated. Asymptomatic (no respiratory symptoms) patients may seek care for another system-related illness, or their condition may be discovered during a routine health examination or employment checkup. The physician should consider risk factors such as age, sex, and smoking habits. Occupational factors such as exposure to asbestos, uranium, chloromethyl methyl ether, or other suspected industrial carcinogens should be noted, and the presence of these should alert the physician of increased risk.

A pulmonary lesion generally is suspected because of symptoms, an abnormal chest roentgenogram, or abnormal sputum cytology.

When respiratory symptoms such as cough, wheezing, hemoptysis, and dyspnea are present, primary lung cancer should be considered in the differential diagnosis of any patient who is in the fifth decade or more of life. Occasionally, extrapulmonary manifestations of bronchogenic carcinoma will prompt the patient to seek medical advice.

Bone pain of pulmonary osteoarthropathy may be severe and simulate other

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types of arthritis. Several of the endocrine syndromes such as hypercalcemia, inappropriate antidiuretic hormone secretion, and Cushing's syndrome may manifest themselves even before respiratory symptoms become evident.

One of the most frequent associated conditions, and regrettably one of the most neglected, is acute obstructive pneumonia. Any segmental or lobar pneumonia should be investigated aggressively by the use of cytologic studies and bronchoscopy to exclude the possibility of obstructing carcinoma. Current knowledge and practice suggest that treating specific respiratory symptoms of men or women who are in the cancer age group is extremely hazardous without obtaining appropriate roentgenographic studies and sputum cytology tests. I believe that almost every patient in whom sputum cultures are indicated is a candidate for sputum cytology studies.

If treatment is to be effective, the physician must maintain a high index of suspicion. Symptomatic cancer of the lung usually is not early cancer. Studies in which results are inconclusive must be repeated, and in high-risk patients, it is dangerous to assume that the causes are benign, without a thorough investigation.

When a roentgenographic abnormality of the chest is noted, comparisons with older films should be made. Long-duration stability may be reassuring, and evidence of laminated calcification by tomography may confirm the presence of granulomatous disease. Numerous studies have shown that subtle abnormalities are difficult to detect on chest roentgenograms. Multiple interpretations may avoid erroneous first impressions.[3,4]

Bronchoscopic examination is an increasingly important step in the evaluation of patients who have roentgenographic abnormalities. The flexible bronchofiberscope has extended the range of inspection to fourth- or fifth-order bronchi routinely, and its employment has made peripheral lesions amenable to sampling with forceps, brushes, and curettes.

If a new lesion has not been confirmed as being benign, thoracotomy is an appropriate and often necessary diagnostic, as well as therapeutic, procedure. Surgical alternatives short of thoracotomy may be desirable in certain patients, but negative results should not cause untoward delay in more definitive approaches.

When sputum cytologic changes are the initial signals of alarm, a particular diagnostic challenge occurs that demands an orderly systematic approach. Multiple specimens of spontaneous or induced sputum will give the cytopathologist the best opportunity to be helpful in diagnosis. Occasionally, other problems such as pulmonary embolism, acute viral infection, and some drug reactions may be associated with metaplasia and cellular atypia that mimic carcinoma cells. These findings are usually transient, and repeated samples become negative in a short time. Carci-

1. Survival in lung cancer according to tumor cell type and American Joint Committee staging.

	Stage I		Stage II		Stage III	
Cell type	% 2 yr	% 5 yr	% 2 yr	% 5 yr	% 2 yr	% 5 yr
Squamous	47	40	40	17	12	10
Adenocarcinoma	46	33	14	7	8	3
Large	43	30	13	7	13	6
Small	6	<1	5	<1	4	<1

nomas of the upper respiratory tract also may desquamate cells in sputum samples so that careful examination of the larynx, oral cavity, and nasopharynx should be included in the evaluation of these patients. Careful and repeated bronchoscopic examinations permit the localization of even small bronchogenic carcinomas in more than 90% of patients presenting with positive sputum cytology and normal thoracic roentgenograms.[5] If initial findings are inconclusive, evaluation should be continued until a final solution can be achieved.

When a pulmonary neoplasm is proved or strongly suspected, the patient should be prepared for surgical resection, if possible. Coexistent medical problems should be identified before surgery and improved or corrected. Special attention to cardiac and metabolic abnormalities that might increase the risk of anesthesia and thoracotomy is essential.

Cytologic or histologic diagnosis based on results of sputum examination, bronchoscopy, or other means may spare some patients who have small-cell undifferentiated carcinoma from operation when there is little hope of effective treatment. Evaluation of respiratory reserve by pulmonary function testing helps determine whether resection would be adequately tolerated. Generally, we consider a forced expiratory volume in 1 second of less than 50%, maximal breathing capacity of less than 50% of predicted normal, and maximal midexpiratory flow of 0.5 liter as precluding pneumonectomy. Lobectomy or lesser resection might be considered in some patients who have a marginal reserve if the tumor is peripheral or amenable to conservative resection. Arterial blood gas measurements taken at rest and during exercise while the patient is breathing room air may add valuable data.

2. Stages of lung cancer: classification of American Joint Committee.

Stage and 5-year Survival	Description (excludes small-cell type)
Occult 70%	No tumor seen on chest roentgenogram or bronchoscopy; cancer cells in sputum or bronchial secretions
I 35-40%	Tumor at least 2 cm below trachea—localized; diameter of 3 cm or less, may or may not be spread to adjacent hilar lymph nodes; or diameter of more than 3 cm without any spread
II 10-15%	Same as stage I, except tumor diameter of more than 3 cm and adjacent nodes regularly involved
III <10%	Tumor or nodal involvement more extensive; may be distant metastasis (to liver, etc)

Results of the physicial examination and laboratory studies should help determine the presence of distant metastasis. Headache or focal neurologic signs may warn of intracranial spread. Liver function tests should be performed routinely, although our group has not used liver scans, biopsy, and laparoscopy as standard preoperative procedures.

Although bronchoscopy has been discussed as a diagnostic procedure, it can be used to assess the resectability of the margins of tumor. In squamous cell carcinoma, particularly, a search for multiple lesions should be made. Recognition of one endobronchial lesion must not prevent a thorough inspection of all remaining accessible portions of the bronchial tree, especially in patients with positive sputum cytology.

Bronchography has not been widely used in the preoperative evaluation, but it may be helpful as a diagnostic aid in patients with positive sputum cytology. Ventilation-perfusion scans have been employed by some investigators, but such scans are often difficult to interpret because of changes associated with coexistent chronic bronchitis or emphysema.

The type of surgical treatment may be selected on the basis of evaluation of scalene node biopsy, mediastinoscopy, or mediastinotomy done in preparation for or in conjunction with open thoracotomy.

The findings at operation and the final surgical-pathologic correlation can be described effectively by the staging criteria of the American Joint Commission for Cancer

Staging and End Results Reporting.[2] The importance of accurate histologic typing and staging is illustrated in Fig 1. Patients with squamous cell carcinoma, which constitutes nearly half of all bronchogenic cancers, have a more favorable outlook than do patients with other cell types. Even in patients with large-cell undifferentiated carcinoma and adenocarcinoma, the prospects in stage I disease are more favorable than they are in the entire lung cancer group.

Patients who survive curative resection should undergo regular periodic checks in a search for recurrence or a second primary tumor. At present, adjunctive therapy has been evaluated incompletely. Currently available chemotherapy or immunotherapy agents and radiation therapy are less than optimally effective and often are accompanied by undesirable side effects.

An interval of three to four months during the first two years is a reasonable schedule for both the physician and the patient. General medical care and unrelated problems must not be ignored. Special attention to the respiratory status (including treatment for chronic bronchitis and bronchospasm), protection of the airway, and treatment of intercurrent respiratory infections are important. If the patient has not stopped smoking, stopping at this stage may be especially critical in order to preserve what remains of compromised pulmonary function.

Recurrence of the primary tumor is the greatest fear and the biggest problem, even in occult or stage I cancers. A sputum cytology test and thoracic roentgenogram should be included as minimal studies, along with a hemogram and blood chemistry studies. Even after the successful treatment of lung cancer, a second primary neoplasm may develop. Sputum studies and chest roentgenograms probably should be continued indefinitely. A new cancer may develop in the upper respiratory tract, requiring diligence to detect it at an early localized stage.

What can optimal application of currently available methods of diagnosis and treatment hope to accomplish? Instead of an overall five-year survival rate of 10% that is now being achieved, it is theoretically possible to do much better if all patients with squamous cell carcinoma, adenocarcinoma, and large-cell undifferentiated carcinoma were treated in the most favorable clinical stage (Fig 2). Obviously, such an improvement cannot be achieved if the lesions are recognized only after they are in an advanced stage. Data supporting the efficacy of screening programs in high-risk populations are sparse. However, preliminary observations from the Cooperative Early Lung Cancer Group of the National Cancer Institute suggest that progress may be made in this direction.[5-7] The burden of proof seems to be shifting to those who challenge screening programs—for them to prove that screening of high-risk patients will not save lives.

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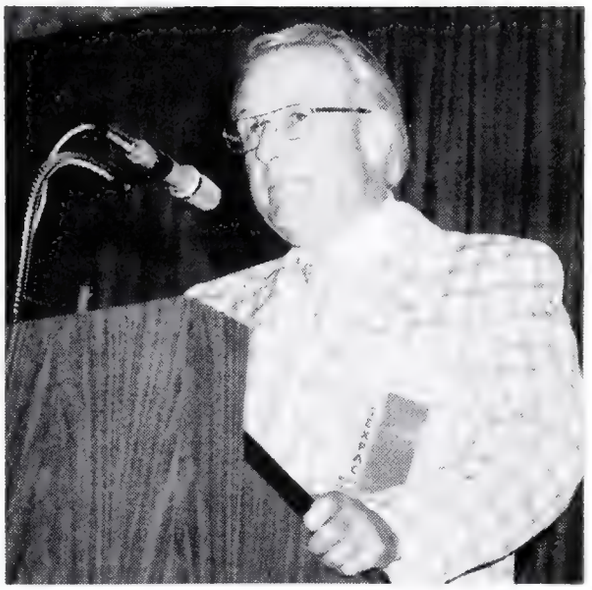
Dr. Sanderson, Mayo Clinic, Rochester, MN 55901.

New president aware of critical job ahead

He attended his first TMA House of Delegates meeting in Galveston when he was 10 years old. This month, nearly 42 years later, Dr. L.S. "Bud" Thompson, Jr., will be installed as president of the Texas Medical Association.

As president-elect, the Dallas physician has had the opportunity to observe the medical association during a critical and eventful year.

"I was most impressed," Dr. Thompson said, "with the progressive unity that I have noticed during the past year in the membership of TMA. The efforts, time, money, and self-sacrifice on the part of physicians are outstanding. It appears that there is a feeling among the doctors that now is the time to fight for what we believe is best for medicine and our patients."



L. S. "Bud" Thompson, Jr., MD

Priorities set

He has several priorities for his term as president: resolution of the malpractice situation, implementation of a single statewide PSRO, involvement of physicians in health planning.

In regard to professional liability, Dr. Thompson feels the citizens of Texas are willing to help TMA accomplish its goals. "To me, the greatest untapped sources of help are our patients. I consider it the duty of all physicians to encourage their patients to work with them toward sound legislation in regard to the professional liability crisis," he stated. He feels certain that there will be a resolution of the crisis and that it will be provided by the state's legislators.

What else does he see developing in the coming year? Dr. Thompson answered, "I feel that there will be a continued effort by the government to develop some sort of national health insurance, but I have enough faith in our legislators to believe that it will be a program that will involve the free enterprise system. I am optimistic that everyone feels that there is a need for national health insurance—one that is workable between the doctors and the insurance industry. I don't believe that there is any way at the present time for the government to finance national health insurance. If it were possible, it would already be a reality."

A firm believer in the capitalistic system of organized medicine, the incoming association head is aware of the growing involvement of government in the delivery of health care. "The major challenge in Texas and the country is to make sure that we have good sound medical input in our medical legislation of which I am sure there will be a volume in the next year."

Dr. Thompson continued, "I would also en-

courage Texas and its doctors to unite with the AMA and present a unified force which, in turn, would make the government realize that the medical profession is an important factor in the delivery of medical care to our people and in directing legislation."

Coming from a long line of doctors, Dr. Thompson talks with confidence about the needs of patients. "I know what the people of Texas expect from doctors and what the doctors expect from their patients," he said. He plans to exert his efforts as president to retain what he feels is the "best form of medical care in the world—the free enterprise system."

Active in medicine, community

Since that first House of Delegates meeting at age 10, Dr. Thompson has steadily increased his interest and involvement in medicine. He graduated from Baylor College of Medicine in Houston in 1948 and served an internship and residency at Kansas City General Hospital. In addition to his private surgical practice, Dr. Thompson serves as vice president and medical director of Southland Life Insurance Company in Dallas. His numerous medical and civic positions and memberships include past second vice president, councilor from Texas, Southern Medical Association; fellow, American College of Surgeons; fellow, International College of Surgeons; diplomate, American Board of Surgeons; executive committee member, Dallas Southern Clinical Society; Association of Life Insurance Medical Directors of America; past president, Society of Life Insurance Medical Directors of Texas; Phi Gamma Delta; Phi Chi Medical Fraternity; past chairman, TEXPAC; and the Public Affairs Council, Dallas Chamber of Commerce.

Within TMA, Dr. Thompson has served on the Committee on General Arrangements for two Annual Sessions, the Council on Medical Jurisprudence (now the Council on Medical Legislation), and the Special Committee on Medical Licensure in Texas. He has chaired the Committee on Public Health.

To keep up with his hectic schedule, Dr. Thompson looks to his family for support. "My family believes as I do," he stated. "They will sacrifice time and monetary means to help me in my career, my private practice, and TMA activities." His family includes two daughters, a son, and his wife Elizabeth, whom he calls his "partner."

One sacrifice during the coming year will most likely be time from the physician's favorite hobby interests—hunting, fishing, and raising quarterhorses. But it is a sacrifice Dr. Thompson willingly accepts.

"My present and future goals, both personally and professionally, can be summed up by saying that I want medicine to always remain the honorable profession that it is. I want our image to be that of the old horse-and-buggy doctor ready to serve and practice medicine at any time. And above all, I want our patients to come first."

A page from the Thompson family album would look much like this. Pictured in the left column from top to bottom are Dr. and Mrs. Thompson; Dr. Thompson with his parents, Dr. and Mrs. L. S. Thompson, Sr.; and Dr. Thompson on his stallion "Bubba." Pictured in the right column are the Thompson offspring. From top to bottom are daughter Lynn, now Mrs. John Rubottom, with the family pet "Cricket," a black labrador retriever; Dr. Thompson and son, Sanders, posing with a record book lion bagged on a hunting trip to Africa; and daughter Marty in western attire.

Medicine in literature

CEREBROVASCULAR INSUFFICIENCY, slide presentation, Medcom, 1972, 100 color slides, 2x2.

Discusses the basic concept of cerebrovascular insufficiency as it relates to carotid circulation and the vertebrovasilar system, the technique for surgical correction of carotid and vertebrovasilar lesions, and the signs and symptoms of these lesions.

NUCLEAR MEDICINE, BONE SCANNING, slide presentation, Medcom, 1974, 100 color slides, 2x2.

Explores the expanding use of this diagnostic tool in clinical medicine, the various imaging devices available and scanning techniques. Accompanying monogram.

NUCLEAR MEDICINE, CLINICAL BRAIN SCANNING, slide presentation, Medcom, 1973, 100 color slides, 2x2.

Illustrates clinical applications of this imaging procedure. Technique indications for use and differential diagnostic possibilities are incorporated. Accompanying monogram.

NUCLEAR MEDICINE, SCINTISCANNING, slide presentation, Medcom, 1971, 100 color slides, 2x2.

A study of nuclear imaging including graphic descriptions of instruments and scanning of the thyroid, brain, cerebrospinal fluid, lung, cardiac pool, placenta, liver spleen, kidney, pancreas, and bone.

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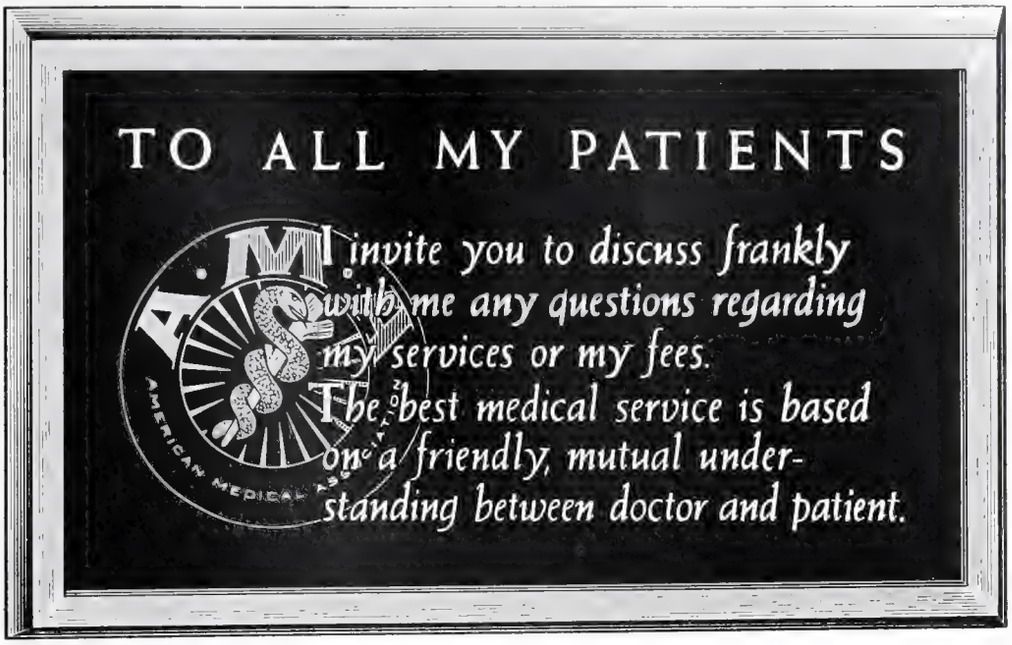

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Medical Newsmakers

A television program focusing on medical, surgical, and psychiatric care of patients suffering from severe burns has received a meritorious achievement award from the Institute for Education by Radio-Television. Videotaped on location at the Shriners Burns Institute and The University of Texas Medical Branch at Galveston, the telecast demonstrated in a three-part series the latest techniques for treating thermal injuries. The clinical demonstrations were conducted by a team of specialists including DR. DUANE L. LARSON, professor of plastic surgery, UTMB, and director, Shriners Burns Institute; DR. HUGO CARVAJAL, pediatric nephrologist, Shriners Burns Institute and assistant professor of pediatrics, UTMB; MARY S. KNUDSON, PhD, chief, Division of Behavioral Sciences, Shriners Burns Institute; DR. ROBERT B. WHITE, professor of psychiatry, UTMB. The series was produced under the supervision of DR. STEPHEN R. LEWIS, chief of plastic surgery and director of continuing education at UTMB. DR. T. G. BLOCKER, Jr., professor of surgery and president emeritus of UTMB, introduced the teaching program. The program was produced by the Network for Continuing Medical Education with the support of Roche Laboratories Division of Hoffmann-LaRoche, Inc. It was seen by more than 30,000 physicians in 725 U S hospitals during March and April, 1975.

DR. GRETCHEN RUNGE was selected as one of Austin's Outstanding Women by the *Austin American-Statesman*. Dr. Runge is the pediatrician/medical director of the Austin Evaluation Center, Inc.

DR. FRATIS L. DUFF, director of the Texas Department of Health Resources, has been named to the National Advisory Committee on Meat and Poultry Inspection. Dr. Duff's appointment is for two years.

BARBARA F. JOHNSON, PhD, has been appointed director of the Division of Communications and Educational Support Services at The University of Texas Medical Branch at Galveston. In this new position, Dr. Johnson will coordinate design and development of educational programs by working with faculty, members of the production teams, and recipients of the instruction.

DR. KATHRYN B. HORWITZ has received the fifth annual Wilson S. Stone Award given for "outstanding achievement in the biomedical sciences accomplished by a student in the United States." The award is presented annually by The University of Texas M D Anderson Hospital and Tumor Institute. Dr. Horwitz received her doctoral degree in physiology in December from The University of Texas Health Science Center at Dallas. She is now a postdoctoral fellow at San Antonio's health science center. She received the award for her research on progesterone receptors and hormone-dependent breast cancer.

DR. LYSLE H. PETERSON, vice president for professional and developmental affairs at The University of Texas Health Science Center at Houston, has received the Philippine Gold Heart Award from Philippine President Ferdinand Marcos. The award was presented to Dr. Peterson by the Philippine ambassador to the United States during the 25th annual meeting of the American College of Cardiology held recently in New Orleans. Dr. Peterson received another honor during the same meeting. He was named an honorary member of the Argentine Cardiological Society. Dr. Bernardo Boskis, president of the Argentine society, presented the honor. Dr. Peterson is president of the International Society of Cardiology.

A new student apartment building at Texas Lutheran College, Seguin, has been named "Renger Hall" in honor of DR. AND MRS. HARVEY RENGER of Hallettsville. The naming is in appreciation of a gift valued at approximately $100,000 recently announced by Dr. and Mrs. Renger. Naming ceremonies were scheduled for March 20 at the college campus.

DR. GEORGE STANCEL, assistant professor of pharmacology at The University of Texas Medical School at Houston, has been granted the Research Career Development Award in support of his studies of the hormone estrogen. The award will pay Dr. Stancel's salary, up to $25,000 annually, for five years. The National Institutes of Health at Bethesda, Md, grants the award to scientists who are involved in significant research. Dr. Stancel is investigating estrogen control of uterine and pituitary function.

DR. BENJY F. BROOKS, chief of pediatric surgery at Hermann Hospital and professor of pediatric surgery at The University of Texas Medical School at Houston, has received the highest award for distinguished humanitarian service of the Hospitaller Order of St. John of Jerusalem. The order is an international philanthropic group dedicated to serving the sick. Crown Prince Andrej of Yugoslavia, the high protector of the order, and his wife, Princess Eva Marie, were in Houston March 19 to present Dr. Brooks the award. The award carries with it a pledge from the order to support pediatric research at Hermann Hospital for the next 100 years.

"He's rallying and on heavy volume."

LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

WARRANTIES OR GUARANTEES OF RESULTS MAY CREATE PHYSICIAN LIABILITY

The Texas Medical Association's Professional Liability Insurance Survey results indicate that few suits by patients against doctors are actually based upon a physician's failure to effect a guaranteed cure or result.

Nevertheless, such allegations brought against physicians in Texas and other jurisdictions have resulted in liability for damages by the physician. A physician generally does not, in the absence of a special contract (which may be oral), guarantee particular results or warrant a cure. The physician warrants only that he possesses the degree of knowledge and skill ordinarily possessed by a member of the medical profession in good standing with the community and that he will use that knowledge and skill in treating the patient.

However, on some occasions, plaintiffs have specifically alleged that the physician expressly agreed to accomplish a particular result or to effect a cure. In such cases, courts have held that if it is proven that a physician entered into an oral or written contract and failed to bring about the result or cure, he is liable for breach of contract even though he was not negligent in the treatment.

The Fort Worth Court of Civil Appeals held in *Helms vs Day,* 215 SW2d 356:

> It is also the law that a doctor may contract with a patient by an express agreement to either cure or not charge and if so he is bound by the general rules pertaining to the laws of contract (citing cases).
>
> The court further stated:
>
> In the absence of a special contract to either cure or not charge for services, it is a rule of law that a doctor never insures results but simply engages that he possesses a reasonable degree of skill, such as ordinarily possessed by a profession generally, and to exercise that skill with reasonable care and diligence, and again to exercise his best judgment, and while so performing he is not responsible for his mistakes of judgment. Of course such general rule may be varied by special circumstances or agreements.

Other states' courts have held that such statements by physicians to their patients as "no danger at all in this operation," or the operation "takes care of all your troubles," or the patient would be able to return to work in "approximately three or four weeks at most" would be sufficient for a jury to find the existence of a contract. If the surgeon was found to have breached the contract, he would be liable for monetary damages even though no negligence in the surgery or treatment was proven.

Courts predominately have held that a special agreement to cure or a guarantee of a specific result depends upon the words spoken and the circumstances under which they were spoken. The determination as to whether or not the words spoken or the written agreements constitute a warranty or contract of cure is a question for the finder of fact, usually the jury.

A Michigan case involved a physician who had promised to perform a cesarean section, but had turned the patient over to another physician without informing that physician of the agreement to perform a cesarean section. The baby was born dead, and the facts established a breach of contract. The judgment of the lower court against the physician was upheld even though no negligence was proven.

The lessons of these cases are clear. The physician should avoid optimistic state-

ments which might be construed by the patient as an assurance of a desirable result, particularly in those instances where the physician is performing reconstructive surgery to correct disfigurement of accident victims or surgery to correct congenital defects or abnormalities of appearance.

The surgeon who engages in plastic surgery should be most cautious to avoid statements which might be interpreted by the patient as a guarantee of a particular result. The Office of the General Counsel of the American Medical Association warns:

> The patient who has had a bad result from cosmetic surgery frequently has the advantage of visual demonstrative evidence with which to elicit the prejudices and sympathies of a jury.

Most consent forms utilized by physicians contain the statement that no guarantee or assurance as to the results which may be obtained has been given by anyone. Each physician should review those forms which he uses to insure that such a statement is contained therein.

MEDICINE AND THE LAW

COURT HOLDS PHYSICIAN 'INDEPENDENT CONTRACTOR' WITH HOSPITAL— DARLING DECISION NOT APPLICABLE

A Texas appellate court has finally addressed the question of hospital liability for a staff member who is not an employee and has rejected the *Darling* doctrine, if indeed there ever was such a doctrine pronouncing the hospital's responsibility for the negligence of a physician holding staff privileges.

Background update

In 1965, the Supreme Court of Illinois rendered an opinion in *Darling vs Charleston Memorial Community Hospital,* 211 NE2d 253, which caused repercussions throughout the United States with regard to hospital liability for a physician's negligence in treating a hospitalized patient.
Some medico-legal writers concluded that the hospital would be liable for the negligence of a physician holding hospital staff privileges without proving negligence of hospital employees merely because of the staff appointment relationship. A discussion of the implications in the *Darling* decision last appeared in this column in May, 1974 when this writer concluded:

> Since Texas law prohibits the hiring of physicians by hospitals to practice medicine as the hospital's employee, it is difficult to find the applicability of the *Darling* decision in the state.

In an opinion filed Feb 18, 1976, the Houston Court of Civil Appeals in *Jeffcoat vs Dr. Phillips, et al* held in part that a physician holding a regular staff appointment in a hospital was an independent contractor. Thus, the hospital was not liable for such a physician's negligent act or omission where the physician was not a hospital employee and regular hospital employees were not proven to be negligent in their duties.
The *Jeffcoat* decision affirmed the summary judgment in favor of the hospital and the Harris County Medical Society but remanded the case for trial in the district court based upon errors in excluding expert testimony with regard to the alleged negligence of the physician. This article will discuss only the aspect of the Court of Civil Appeals' opinion relating to the physician-hospital relationship.

Discussion

The Houston court held that a hospital is generally liable under the doctrine of respondeat superior for injuries negligently inflicted by a hospital employee acting with the course and scope of his employment. Further, the court noted that the hospital may be liable for a breach of the duty which the hospital owes directly to the patient and may be liable for negligence in the selection or retention of an agent or employee. Hospital liability also arises from the institution's provision of defective or ineffective facilities or equipment when such actions are proven to be negligent and the proximate cause of the injury or death.
The court cited with approval the rule set down in a Georgia Court of Appeals case (*Newton County Hospital vs Nickolson,* 207 SE2d 659, 1974) which held:

> The general rule is that a hospital is not liable for injuries resulting from the negligent acts or omissions of independent physicians. No respondeat superior liability attaches where the physician is an independent contractor and not an employee or servant of the hospital.

Additionally, the court noted that the *Darling* decision had been cited for the proposition that a hospital may be liable for negligence in granting or continuing surgical

privileges where it knows or should know that a particular physician is unqualified or unskilled. The Texas court stated that the status of the physician in the *Darling* case was not clear and that this decision may "simply be a case in which the hospital was held responsible for the negligence of its employee."

More importantly, the court found the Texas law, and the majority opinion in the United States, to be clear on this point. The court said:

> In any event a doctor of the choice of a patient is still considered by a majority of states to be an 'independent contractor' with regard to hospitals at which he has staff privileges (citing *Houston Law Review*). The summary judgment record here affirmatively establishes that the Jeffcoats had an ongoing doctor-patient relationship with Dr. Phillips entirely aside from the Hospital. Further, they had firsthand knowledge of his performance as a surgeon and the manner in which he performed appendectomies in particular. Nevertheless, they continued to make use of his services and employed him to perform the appendectomy in question sixteen months after a similar operation on their daughter. We adhere to the majority rule and hold that where it is shown that no employer-employee, principal-agent, partnership, or joint venture relationship exists between the hospital and the physician, a hospital is not liable for granting or continuing surgical privileges where the patient has chosen the physician and the hospital is not otherwise liable. On the undisputed record before the court the Hospital was entitled to judgment as a matter of law.

Conclusion

The Texas court has rejected the *Darling* doctrine, if indeed the Illinois Court ever truly pronounced such a doctrine of a hospital's responsibility for the negligence of a physician holding staff privileges. The Texas court concluded that a non-employed physician is an independent contractor, and in the absence of joint negligence of hospital employees, the institution itself is not liable for the physician's negligence. The importance of this ruling, if it remains unchanged by appeal to the Texas Supreme Court, is a reaffirmation of the concept that the physician shall direct and be responsible for the care of his patient without interference from the hospital and that hospital intrusion into medical decisions based upon the rationale of hospital liability for physician negligence is unfounded in this state.

TMA Office of General Counsel
Sam V. Stone, Jr.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

E.W. Bishop
San Antonio, 1921-1976

Maurice Jacobs
Austin, 1907-1975

B.D. Koshkin
Beaumont, 1917-1975

F.M. Martin
San Antonio, 1903-1976

W.M.McNatt
Dallas, 1917-1976

A.G. Schoch
Dallas, 1903-1975

E.S. Stanley
Dallas, 1911-1975

J.J. Symon
Friendswood, 1930-1976

J.T. Tucker
Fort Worth, 1893-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. Bishop

Dr. Jacobs

Dr. Koshkin

Dr. E. W. Bishop

Dr. Elmer Wayne Bishop, 54, died Jan 5, 1976. He had been a resident of San Antonio since 1951.

Dr. Bishop, a native of Lowell, Ark, attended the University of Arkansas. In 1950, he was graduated from the University of Arkansas School of Medicine. His internship was at the Santa Rosa Medical Center, San Antonio.

The family physician was a member of the Bexar County Medical Society and the American Medical Association. He also was affiliated with the staffs of Santa Rosa Medical Center and Lutheran General Hospital, San Antonio. He served four years in the US Army, attaining the rank of captain.

Surviving Dr. Bishop are three brothers, Howard Bishop, Lowell, Ark; Wade Bishop, Fayetteville, Ark; and Edwin Bishop, Colorado Springs, Colo; and a sister, Genevieve Pharris, Villa Park, Calif.

Dr. Maurice Jacobs

Dr. Maurice Jacobs of Austin died Dec 3, 1975, at the age of 68.

The physician had practiced orthopedic surgery in Austin since 1956. Previously he had practiced in Mattapoisett, Mass, and New Bedford, Mass.

In 1931, Dr. Jacobs was graduated from Tufts University School of Medicine in his native city of Boston. His internship was in New Bedford and his residency at Parkland Memorial Hospital, Dallas. He was the recipient of a fellowship for postgraduate study at the Carrell-Girard Clinic, Dallas. He also did postgraduate work at the University of Iowa.

Dr. Jacobs, a veteran of the US Army (1941-45), was a member of the American Medical Association and the Travis County Medical Society.

Surviving are his wife, Alma Kapner Jacobs, Austin; daughters, Lois A. Jacobs, Albuquerque, NM, and Rachel Jacobs, Houston; and a sister, Frances Benson, Utica, NY.

Dr. B. D. Koshkin

Dr. Bernard David Koshkin, a Beaumont surgeon whose practice also included industrial medicine, died Dec 28, 1975, at his home. He was 58 years of age.

Dr. Koshkin, a native of New Haven, Conn, was graduated from Louisiana State University (1940) and Louisiana State University Medical Center (1943). He served an internship and residency in New Haven. He also had residency training at the Veterans Administration Hospital, New Orleans.

Prior to moving to Beaumont in 1949, Dr. Koshkin had practiced in Talara, Peru. His private practice was interrupted by service as a US Army major in Japan and Korea for two years. While in the service, he was a member of a Mobile Army Surgical Hospital (MASH) unit.

Dr. Koshkin's professional memberships included Jefferson County Medical Society, Southwest Surgical Congress, American College of Surgeons, Surgical Society of Southeast Texas, 38th Parallel Medical Society, American Society of Abdominal Surgeons, and American Medical Association.

Surviving the physician are his wife, Naomi Braver Koshkin, Beaumont; two sons, Roger Koshkin, Arlington, Va, and Ben Koshkin, Houston; brother, Fred H Koshkin, New Orleans; and a granddaughter.

Dr. F. M. Martin

Dr. Frank McPherson Martin, an honorary member of the Texas Medical Association, died Jan 19, 1976, in San Antonio. Cause of death was emphysema.

Dr. Martin, a pediatrician, was a native of Spokane, Wash. He was graduated from the University of Michigan with the bachelor of science degree. He completed his medical education at the University of Michigan Medical School in 1929. His internship was at University Hospital, Ann Arbor, Mich, and his residency was at Children's Hospital, Denver.
Dr. Martin, 73, had been an honorary member of the Bexar County Medical Socity and American Medical Association.
He was a former member of the US Air Force, discharged with the rank of captain.
Surviving Dr. Martin are his wife, Brunette Martin; and sons, Douglas M. Martin and Philip W. Martin, all of San Antonio.

Dr. W. M. McNatt

Dallas proctologist Dr. Walter Malcolm McNatt died Jan 4, 1976, at the age of 58.
Dr. McNatt, who had been associated with The University of Texas Southwestern Medical School, had practiced in Marshall, Tex, from 1948 to 1961, and in Dallas from 1962 until the time of his death.
The native of Lometa, Tex, attended Lamar State College of Technology, Beaumont (1934-36), and The University of Texas at Austin (1936-39), before entering Baylor College of Medicine. He obtained his MD degree in 1943.
Dr. McNatt's professional memberships included the Dallas County Medical Society, Texas Proctological Society, American College of Surgeons, American Proctologic Society (fellow), and American Medical Association.
He served in the Army Medical Corps during World War II.

Surviving the physician are his wife, Cheeta Ellis McNatt, Dallas; one son, James Malcolm McNatt, Marshall; two daughters, Mrs. Charles Moore, Waco, and Markeeta Lamberth McNatt, Dallas; his mother, Mrs. Lanta McNatt, Naples; four sisters, and three grandchildren.

Dr. McNatt

Dr. A. G. Schoch

Dr. Arthur Gerhard Schoch, an honorary member of the Texas Medical Association, died Dec 4, 1975. He was a resident of Dallas.
Dr. Schoch, 72, was clinical professor of dermatology at The University of Texas Health Science Center at Dallas, and had previously served as head of the Division of Dermatology at Southwestern Medical School. He published the Schoch Letter, a monthly newsletter on dermatology, for 25 years. It is now published through the American Academy of Dermatology.
Dr. Schoch was a native of Austin and was graduated from The University of Texas there (1923). In 1927 he was graduated from The University of Texas Medical Branch, Galveston. He held an internship at the Graduate Hospital of the University of Pennsylvania, which was followed by a three-year fellowship in dermatology and syphilology at the same institution. Upon completion of his specialty training in 1931, Dr. Schoch moved to Dallas to begin practice.
In 1932, he was instrumental in opening a venereal disease clinic, which later became a unit of the City Health Department. In 1944, Dr. Schoch helped to raise funds to open and equip the Penicillin Research Center, Dallas.
Dr. Schoch was a past president of the American Academy of Dermatology and Texas Dermatological Society. He was an honorary member of the Dallas County

Dr. Stanley

Dr. Symon

Medical Society and the American Medical Association. He also was a member of the Dallas Gun Club and the Dallas Country Club.
Surviving are his wife, Elizabeth Lubben Schoch, Dallas; two daughters, Mrs. James Killough, Jr., Dallas, and Harriet Schoch, Los Angeles; a sister and brother; and two granddaughters.

Dr. E. S. Stanley

Dr. Edward Stephen Stanley, 64, of Dallas, died Dec 11, 1975.
A Dallas resident 60 years, Dr. Stanley had maintained a private practice 34 years.
He was a native of Chicago, and a graduate of Southern Methodist University and Baylor College of Medicine. Following completion of the MD degree, Dr. Stanley was an intern at St. Paul Hospital, Dallas.
Dr. Stanley, a family practitioner, was a veteran of World War II. He served in the Army Air Corps.
The doctor's professional memberships included the Dallas County Medical Society, American Medical Association, and American Academy of Family Physicians. He also was a member of the Roy Stanley Masonic Lodge and St. Luke's Episcopal Church.
Surviving are his wife, Elisabeth Holman Stanley and daughter, Elisabeth Stanley, both of Dallas; and son, Stephen Stanley, of Houston.

Dr. J. J. Symon

Dr. Joseph James Symon, who had practiced medicine in Friendswood for 12 years, died of cancer Jan 12, 1976.
Dr. Symon was one of the founders of Clear Lake Hospital, Webster, where he served as vice-chief of staff and as a member of the board of governors. He had been Friendswood's city health officer for several years.
Dr. Symon, a native of Chicago, was graduated from the University of Illinois in 1952. Upon graduation from the University of Illinois College of Medicine in 1956, he became an intern at St. Joseph Hospital, Flint, Mich.
Following his internship, Dr. Symon became a member of the US Navy. He was separated from the service in 1961 as a lieutenant commander.
Before moving to Friendswood, the family physician had practiced in Clarendon Hills, Ill; Decatur, Ill; and Alvin, Tex.
Dr. Symon was a member of the American Academy of Family Physicians and Galveston County Medical Society.
Survivors include his wife Diana Alves Symon, Friendswood; sons, Jeff Symon, Nacogdoches, and Jamie Symon, Alvin; daughters, Julia Symon, Nacogdoches, and Jennifer Symon, Alvin; his parents, Mr. and Mrs. Joseph V. Symon, Riverside, Ill; and brother, Dr. James Symon, San Francisco.

Dr. J. T. Tucker, Sr.

An honorary member of Texas Medical Association, Dr. John Trenton Tucker, Sr., Fort Worth, died Jan 8, 1976. He was 82 years of age.
Dr. Tucker, a native and lifelong resident of Fort Worth, was graduated from the Fort Worth School of Medicine in 1915. His internship was at St. Joseph's Infirmary, now St. Joseph Hospital, Fort Worth.
For many years, Dr. Tucker served as a surgeon for the Santa Fe and Rock Island Railroads. In 1948, he was joined in his practice by his son, Dr. John T. Tucker, Jr.
He was a member of the Tarrant County Medical Society, American Medical Association, American Academy of Family Physicians, and the American Railroad Physicians and Surgeons Association. Nonprofessional memberships included the First Christian Church and the Fort Worth Chamber of Commerce.
In addition to his son, Dr. John T. Tucker, Jr., Fort Worth, Dr. Tucker is survived by three grandchildren and one great-grandchild.

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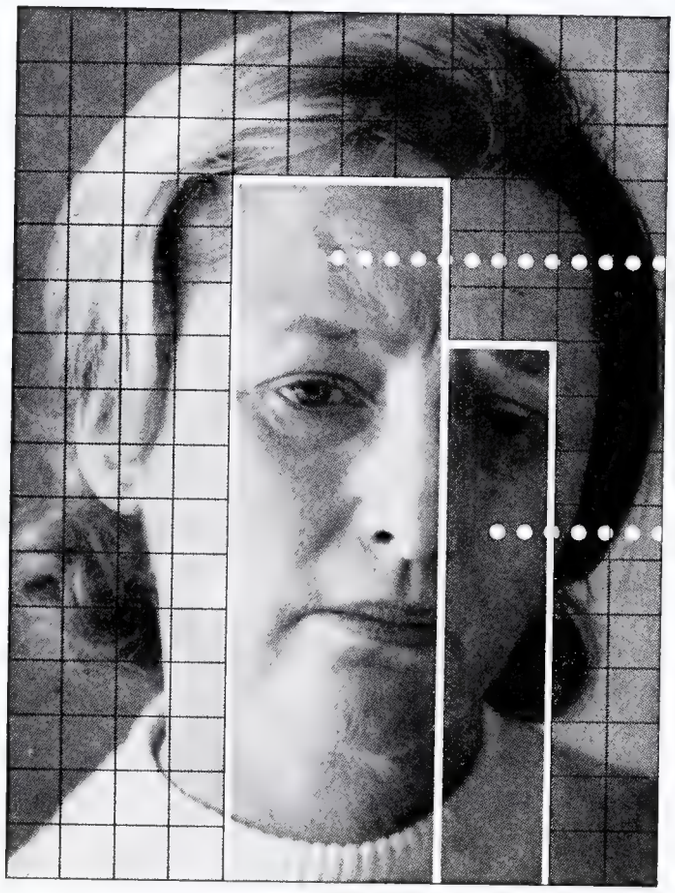

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequer and/or severity of grand mal seizures m require increased dosage of standard ar convulsant medication; abrupt withdraw may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous in gestion of alcohol and other CNS depres sants. Withdrawal symptoms (similar to those with barbiturates and alcohol) hav occurred following abrupt discontinuanc (convulsions, tremor, abdominal and mu cle cramps, vomiting and sweating). Kee addiction-prone individuals under carefu

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According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

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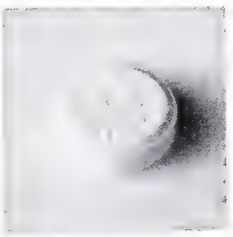

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WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start for salary of $45,000 per year negotiable. City has population of 6,000 with trade area of 20,000 to 25,000. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79710; telephone 915-267-6361.

LOCUM TENENS WANTED: Doctor interested in GP work with OB. To cover one doctor on weekly, monthly or any time of the year basis. Financial arrangement negotiable. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

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WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

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PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PATHOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: RADIOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact J. E. Hogan, M.D., Medical Director, Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL INTERNIST WANTED: Board certified or eligible to join expanding successful group. Busy hospital and office practice. Houston environs. Excellent salary and fringe benefits. Contact Doctors Clinic, 1501 Broadway, Galveston, Texas; attention Robert Walsh, Administrator.

WANTED: GP OR PEDI. Potentially, lucrative practice, suburban area of about 20,000. No Pedi in area. Willing to negotiate. Paul A. Grandy, M.D., 10805 N. Lamar Blvd., Austin, Texas 78753; 512-837-2640.

PHYSICIANS WANTED—Progressive gulf coast community of over 12,000 with new 56 bed accredited hospital, an hours drive south of Houston metropolitan facilities. Good schools, excellent beach and other varied recreational opportunities close by. Contact: James Perry, Administrator, Angleton-Danbury General Hospital, 132 Hospital Drive, Angleton, Texas 77515; 713-849-7721.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

PATHOLOGIST—part time—excellent opportunity for semi-retired, female, sports person. Current assistant of two years going into full time practice. 190 bed general hospital. Very congenial practice in suburban-rural community. Live anywhere in Dallas-Fort Worth metroplex. Salary adequate for good living! Arthur L. Raines, M.D., P.O. Box 686, Cleburne, Texas 76031. 817-645-9181, ext. 360.

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PSYCHIATRY RESIDENCY AVAILABLE at Texas Research Institute of Mental Sciences, Houston, in the Texas Medical Center. Applicant must have internship or equivalent year of graduate medical education. First year stipend without service obligation, $15,000; or optional $19,000, with State career obligations. TRIMS features comprehensive programs in all facets of service, research, and training. Affiliated with local medical schools and other institutions. For information contact Ed Johnstone, M.D., Texas Research Institute of Mental Sciences, 1300 Moursund, Houston, Texas 77030.

MID-GULF COAST: INTERNIST with cardiology sub-specialty; family practitioner needed to practice in very progressive medium sized community on Gulf Coast. Excellent schools, churches with a friendly area population. New hospital with 60 beds under construction now. Excellent sports and recreation near by with hunting and salt and fresh water fishing. Plan guaranteed income for two years to acceptable people. Call 713-543-3367 or write P.O. Box 405, El Campo, Texas 77437.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OCCUPATIONAL, AEROSPACE, PREVENTIVE MEDICINE. Board certified or eligible physician in occupational, preventive or aviation medicine for primary care practice in large, 60-man clinic and satellites with opportunity to participate in executive health, family practice, occupational medicine and prepaid health care program. Teaching and research opportunities in adjacent Texas Medical Center. Salary negotiable. (No dual compensation involved for retired.) Write or call Dr. M. B. Johnston, Kelsey-Seybold Clinic, 6624 Fannin Street, Houston, Texas 77030; telephone 713-797-1551.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

WANTED: FAMILY PRACTITIONER, INTERNIST OR GENERAL SURGEON willing to do general practice to join the only two family practitioners in community and modern clinic. Recently completed community hospital. Located between Houston and San Antonio. Salary negotiable with training. Must see facilities and community to appreciate. Contact Drs. R. Cecil Marburger or C. I. Shult, 1220 Bowie, Columbus, Texas; 713-732-2318.

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GENERAL PRACTITIONER NEEDED for solo practice. 30 bed general hospital, Medicare approved. Quiet, rural town. Free office space provided. One other physician on active staff. Excellent public school system. Good hunting and fishing. Friendly people. Contact Administrator, Throckmorton County Memorial Hospital, P.O. Box 487, Throckmorton, Texas 76083; 817-849-2151 or 817-345-3206.

GENERAL INTERNISTS—Area physicians are actively seeking two general internists to practice in bedroom community of 80,000 in Northeast Dallas in affiliation with new full service 106-bed private hospital. Excellent fringe benefits, liberal salary guarantees, interview trip and relocation expenses are offered. Residents enjoy excellent recreational facilities, superior public schools, and a wide range of housing. Send detailed curriculum vitae to Ad-628, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE/GENERAL PRACTICE—Excellent private practice opportunity exists in Northeast Dallas bedroom community of 80,000 in affiliation with new full service 106-bed private hospital. Excellent fringe benefits, liberal salary guarantees, interview trip and relocation expenses are offered. Residents enjoy excellent recreational facilities, superior public schools, and a wide range of housing. Send detailed curriculum vitae to Ad-629, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PRIVATE PRACTICE OPPORTUNITY with guaranteed success now available in modern twenty-five bed, JCAH-approved private hospital and a new four-doctor clinic. Located in the heart of the Gulf Coast industrial center, twenty minutes from both downtown Houston, Texas and the Space Craft Center. Clinic furnishes all overhead including rent, supplies and personnel. To insure success, a guarantee of $3000 per month for six months is offered. Earnings limited only by personal desire as you maintain a private fee for service practice. For details, contact Floyd D. Pendergrass, Ph.D., Executive Director, Deaton Hospital, Inc., 208 North Main Street, Galena Park, Texas 77547. Phone or wire collect 713-672-6311.

DALLAS—INTERNAL MEDICINE OR FAMILY PRACTICE. Ideal opportunity. Doctor leaving practice, July 1976. In medical building of 25 doctors, no internist, only one in family practice. This is very busy practice, gross $200,000 last year. I will call you in confidence. Write to Ad-631, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

TEXAS. FULL TIME EMERGENCY PHYSICIANS wanted by ER group. Flexible hours. Competitive remuneration. Reference Ad. A. Contact: S. Powers, M.D., 2410 S. Voss, Suite G116, Houston, Texas 77057; 713-783-9299.

EMERGENCY PHYSICIAN: El Paso. Full time in new 290 bed hospital with developing ED. Malpractice covered. $45,000/year minimum. D. Moran, M.D., Sierra Medical Center, 1625 Medical Center Drive, El Paso, Texas 79902; 915-544-0900.

WANTED: PEDIATRICIAN to join a multispecialty group with two board pediatricians. Guaranteed salary $30,000 plus many fringe benefits. Contact F. L. Phillips, M.D., Glen Valley Clinic, 7630 Bellfort, Houston, Texas 77061.

HOUSTON, AND OTHER TEXAS COMMUNITIES. Practice Management Services has been engaged by private practitioners, institutions, rural communities and corporations to locate physicians to join them. No charge to you as they pay our fee. Send curriculum vitae to Ted Shown, Director of Physician Search/Placement Division, Practice Management Services, 2400 Fountainview, Suite 408, Houston, Texas 77057; 713-784-1200.

OPHTHALMOLOGIST WANTED in South Central Texas to take over equipped office of retiring ophthalmologist; buy only the sharp instruments, pay reasonable rent on building and other equipment. Practice grosses $62,000 without surgery. Nice semi-retirement opportunity. Available March first. Please reply to Ad-608, *Texas Medicine*, 1801 North Lamar Blvd., Austin. Texas 78701.

EMERGENCY DEPARTMENT Director and associate physicians needed for 500 bed Dallas hospital. "Fee-for-service" with paid malpractice and benefits. Contact Drs. Cooper and Spurgeon, toll free 1-800-325-3982 or send resume to Ad-632, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

TWO FAMILY PHYSICIANS, one preferably FP/surgeon, needed. 18 year old established practice open. Physician has retired leaving tremendous opportunity for physicians seeking practice in a small community with excellent schools, community spirit, climate and stable population. Near I-35, 15 miles from Waco and three large lakes. Fully equipped clinic. New 49 bed accredited hospital with excellent staff. Call collect, person to person: Gladys B. Wilson, Administrator, West Community Hospital, West, Texas; 817-826-5381, or Alvin R. Payne, President, Board of Directors, 817-826-5321.

OPPORTUNITY: City of 3,421; area of 16,800. Opportunity for IM to join group of two FPs. Office space available in clinic with FPs. Salary to start and partnership in year. Ophthalmology, ENT, and two FPs now in community. One hospital, 38 beds, open staff. 60 miles from Houston, 90 miles from Austin, 125 miles from San Antonio. County seat, good schools. Community income from oil and gravel industries, ranching and construction industries. Contact: C. I. Shult, M.D. or R. Cecil Marburger, M.D., Medical and Surgical Clinic, 1220 Bowie, Columbus, Texas 78934. Telephone: 713-732-2318.

PHYSICIAN TRAINED INTERNAL MEDICINE, cardiology, board certified or eligible, to share established practice and work into full partnership. Fine opportunity for well trained individual. Partnership available in year, work load can be adjusted to meet specific desires and motivation. Send curriculum vitae. Ad-634, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER OR INTERNIST WANTED with Texas license for Student Health Physician. Forty hour week, Monday through Friday, no call or weekend duty. Annual salary of $30,000 with fringe benefits and a pleasant association with two other physicians to care for students. Please contact Mary E. Smith, M.D., Director, North Texas State University Student Health Center, P.O. Box 5158, Denton, Texas 76203. Telephone 817-788-2331. We are an equal opportunity/affirmative action employer.

TEXAS—NORTHEAST: EM Department physicians. Immediate opening available in established ACEP oriented group. Positions in four fine communities in Northeast Texas (population from 20K to 75K). All have the convenience of a large urban center nearby, yet offer a more stable, simple and serene lifestyle with many recreational and cultural opportunities. Prefer career oriented ED MD's. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes, including malpractice insurance. Write Emergency Medical Consultants, 3600 Gaston Avenue, Dallas, Texas 75246 or call 214-823-6850.

Situations Wanted

ANESTHESIOLOGIST 49, board certified with Texas license. Desiring Gulf location. Will be available in the summer of 1976. Please reply to Ad-606, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST 46, university trained, certified. Two years NIH fellowships in cardiovascular radiology and one year fellowship in neuroradiology. Publications. Presently head of cardiovascular radiology section with an active echocardiographic section in a major north central teaching center. Seek challenging position in private practice, or teaching position. Ad-614, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MARRIED, AGE 37 YEARS. Immigrant visa. Finished three years of residency and one year clinical fellowship in anesthesiology. Have Texas and Georgia medical licenses. Would like to settle in Texas. Board eligible. Available immediately. Call 216-229-2200 ext. 2650 or write Avutu R. Reddy, M.D., Cleveland Clinic, Cleveland, Ohio 44106.

BOARD CERTIFIED, DYNAMIC, ECLECTIC, bi-lingual, 35 year old psychiatrist with ample experience in individual psychotherapy and institutional psychiatry and with excellent recommendations wishes to join partnership in the area of San Antonio, Texas. Please reply to Ad-616, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGERY AND PEDIATRIC SURGERY. FMG, ECFMG and surgical board eligible. 34 years old, married. Want associate, group or guaranteed. Prefer close to middle or big size city. Please reply to Ad-620, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXPERIENCED BOARD CERTIFIED GENERAL SURGEON and wife board certified OB/GYN and certified cytologist looking for a permanent position in medium size or large city in Texas. Please reply to Ad-610, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED DIAGNOSTIC RADIOLOGIST with extensive experience in neuro-radiology, vascular procedures and special procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join hospital based group with private office. Available after three months time. Please reply to Ad-622, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BLUE-CHIP PHYSICIAN ASSISTANT looking for position in Austin or Hill Country area. Two years experience, including surgery. Baylor graduate 1973, Houston, Texas. Please reply to Ad-627, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST—45 year old, board certified AP-CP. Also board certified in OB/GYN. Experienced in clinical medicine as well as laboratory medicine and laboratory management. Desires hospital laboratory directorship to provide a first class service to a progressive medical staff. Please reply to Ad-630, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED OBSTETRICIAN AND GYNECOLOGIST with vast experience in all operative procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join group with private office. Available after three months time. Please reply to Ad-623, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: 36, male. Board certified, both AP and CP, also with Ph.D. in pathology. Well trained and experienced in hospital laboratory practice. Seeking position as laboratory director or full partnership. All locations, prefer coastal metropolitan area. Available 2-3 months notice. Please reply to Ad-633, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIANS ASSISTANT, 29 years old, married. BS psychology, Baylor P.A. graduate 1976. Ex-Navy corpsman, seeks position with GP/FP in medium to large Texas city. Available August 1976. Contact A. Robichaux, 2327 Wroxton, Houston, Texas 77005.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

MUST SUBLEASE — Medical or dental office, 1,100 sq. ft., $450 monthly. Carpeting, drapes, utilities and cleaning included. Original lease expires August 1976. Contact Dr. Robert Birchall, 1415 Third Street, Suite 502, Corpus Christi, Texas 78404. 512-882-9278 or 412-882-8226.

OPTICAL COMPANY FOR SALE situated in metropolitan area with gross sales in excess of $225,000, incorporated and enjoys established clientele, glasses and contact lenses dispensed from several offices, personnel including management available to continue operations. Principals only please reply to Ad-597 *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DOCTORS SUITES, approximately 1,000 square feet at 45c square foot including all bills and janitor. One block to hospital. Heights Med Arts Center, 411 West 21st Street, Houston, Texas. Call Irving Richie, 781-3138 or 862-2562. Write to 2100 Fountain View #29, Houston, Texas 77027.

NEW OFFICE SPACE for lease in northwest San Antonio. One block from Loop 410 and Interstate 10. Will finish out to suit tenant. Contact Mossrock Professional Building, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

FOR SALE: 2 Beckman Type T EEGs. $1250 each. Available now. John E. Skogland, M.D., 1327 Medical Arts Building, Houston, Texas 77027; 713-225-4139. 8½ inch EEG paper also for sale as extra item.

FOR LEASE OR SALE—VERY MODERN CLINIC, due to owner's death. Furnished, many extras. Latest equipment including lab, x-ray, EKG. 3750 square feet. Grossed $200,000-$300,000 annually. Completely staffed with lab, x-ray, office personnel. Reasonable terms. Ample (5) open staff hospital facilities. One block from Texas Tech University and Medical School. Records of 2400 families on file. Contact Clifford E. Payne, Jr., 4601 West 17th Street, Lubbock, Texas 79416; 806-799-6789.

FOR SALE OR TAKE OVER LEASE—Buy payment. NCR Model 395 Electronic Accounting Machine. 100 memory banks. Must dispose of due to partnership dissolution. John C. Koch, M.D., P.O. Box 388, Lufkin, Texas 75901.

FOR SALE: Family practice established in 1946, now large part is industrial medicine. I wish to leave this practice in the next two to three years. Please reply to Ad-621, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OB-GYN OR FP: Fully equipped, three examining rooms, superb location close to major hospitals. Utility bills and cleaning included. Present practice can be kept and will introduce. First lease to October 1978, thereafter on a five year basis. Coastal city of South Texas. Reply to Ad-624, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DOCTOR SHORTAGE—in affluent suburb West of Austin. Beautiful space available in new professional building. 15 minutes from hospitals. Designed with no architectural barriers—your office customized. Ample parking. 45¢ per square foot. Call or write Marge Yancy, 97 West Bee Caves Road, Austin, Texas 78746; 512-327-0350.

FOR LEASE: Twelve hundred square feet of office space for medical or dental offices. Across from 200 bed municipal hospital, open staff. Located in McKinney, Texas, population 18-20,000, with trade area of approximately 60,000. Will arrange lease terms to accommodate tenant. Please contact Marshall M. Searcy, M.D., Searcy Properties, Professional Building, McKinney, Texas.

FOR SALE, due to doctor's death. Modern, 2400 square feet clinic, 23 bed hospital. Equipped with x-ray, lab and other items necessary to function. Price and terms can't be beat. Prospering rural area with large dedicated drawing area. Additional benefits. Contact Martin Lee, Bronte, Texas; Phone 915-473-3611.

PRACTICE FOR SALE: Well equipped, furnished and active 1000 square feet office, located North side of San Antonio. Available by July 1, 1976. Near the main hospitals. We will transfer account receivable and introduce patients. Call 512-344-2441, between 6 and 7 p.m.

MOVING TO HOUSTON? Unusual contemporary home. 4 bedrooms, 3 bath, two car, quarters. 3500 ft. swimming pool, wooded 3/5 acre MEMORIAL DRIVE. Prestige, fire proof (rare in Houston), termite proof, burglar alarm, gourmet kitchen, easy maintenance, close to best schools. Many built-ins, landscaping, sprinkler system, fenced. $182,500 negotiable. By appointment. 713-668-2891.

FAMILY PRACTITIONER—ONE OR MORE. Clinic available for lease or sale. Excellent opportunity for one or more physicians in West Texas. Town with a new modern hospital. Contact Robert Herndon, Administrator, Childress General Hospital, P.O. Box 627, Childress, Texas 79201; 817-937-2575.

NOW DEVELOPING ROUND ROCK'S ONLY PROFESSIONAL CENTER. Excellent opportunity to be only M.D. located in the fastest growing community in Central Texas. For details contact Mary Lou Barrow, Mayfield Realty, at 512-345-1166, or P.O. Box 9576, Austin, Texas 78766.

BIOFEEDBACK INSTRUMENTATION for stress-related disorders. Quality EEG, EMG and temperature biofeedback instrumentation priced from $150-$5,000. Write for free catalog. BioScan Corporation, Box 14168, Depart. A-14-03, Houston, Texas 77021.

AUSTIN—NEW OFFICE SPACE FOR LEASE. Cannon Professional Park is a uniquely designed plan for medical and dental offices in South Austin. Located on William Cannon Drive, The Park offers easy accessability to major city arteries and is convenient to hospitals and downtown. Only 3 percent of Austin's total physicians and 12 percent of the dentists practice in this Hill Country setting, since facilities have not kept pace with the accelerated growth. Each office has its own private entrance, with a covered walkway and ample parking. Call or write Cannon Professional Park, c/o 3913 Medical Parkway, Austin, Texas 78756; Phone 512-451-8489.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

PHYSICIANS—INVEST IN YOUR OWN INDUSTRY. Be part of the fastest growing segment of the health industry. Diversify your income base with substantial returns and low risk factor. Not speculative or time consuming. For details call Nelson B. Guyer, 214-357-6655.

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The Texas Department of Corrections in Huntsville, Texas, has an opening for a Psychiatrist. The individual will be expected to work with multi-disciplinary personnel in providing treatment and case management services, and on occasion, perform general medical duties. A current Texas Medical License and appropriate training in psychiatry is required. Salary is $34,000.00 per year, with an increase to $35,800.00 September 1, 1976. Other benefits are extensive, and where available, include housing, utilities, and commodities (food). Malpractice protection is provided by the State of Texas. Interested applicants should contact either: Ralph E. Gray, M.D., or Windel L. Dickerson, Ph.D., Texas Department of Corrections, P. O. Box 99, Huntsville, Texas 77340, or telephone 713-295-6371 ext. 210 or 437.

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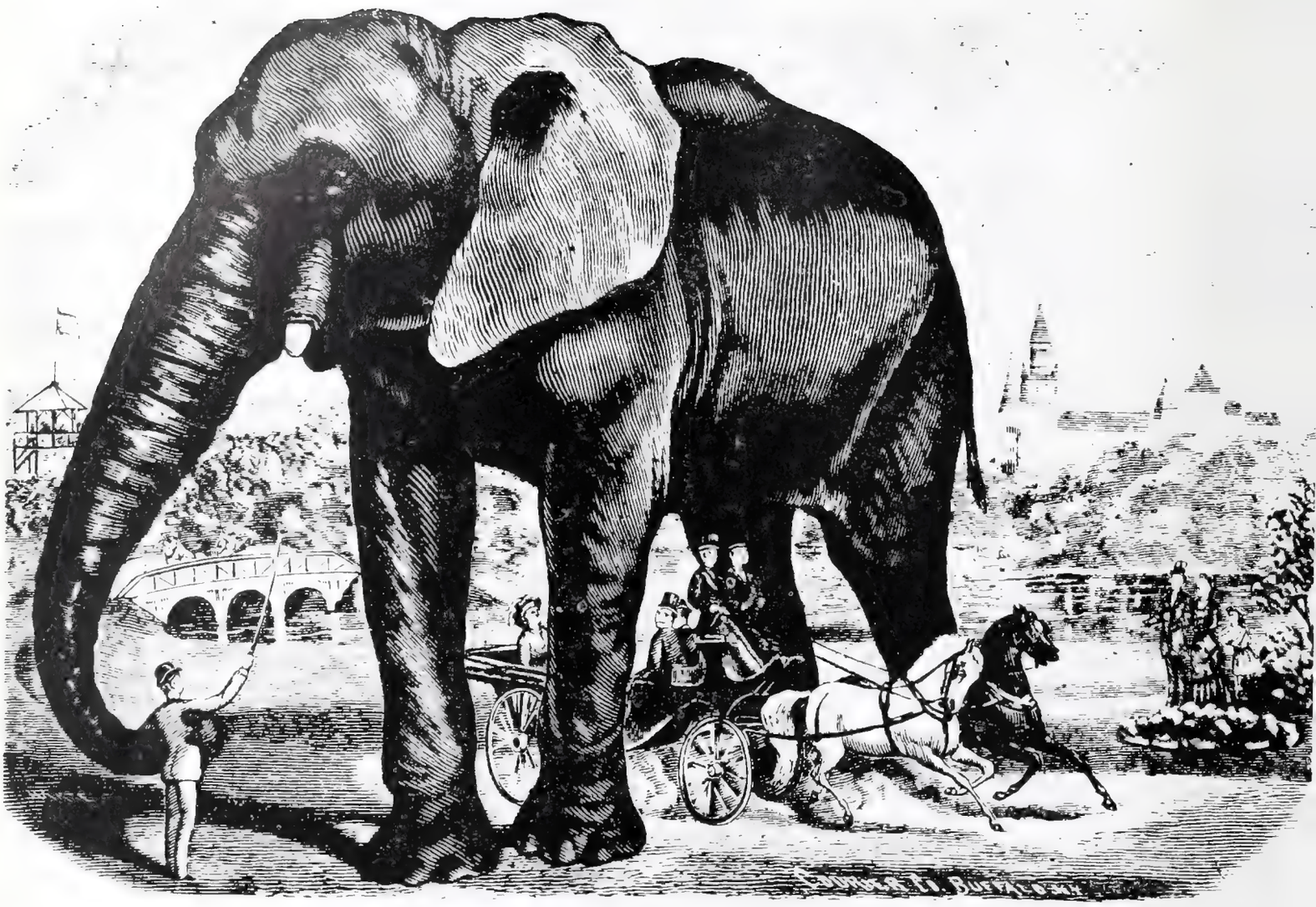

See The Motorcycle ?

You may not find a motorcycle in this picture, but you'll find plenty of them on Texas' streets and highways.

The trouble is, not enough automobile drivers are seeing motorcycles when they should. Not until it's too late, anyway.

Maybe if motorcycles were as big as elephants, you'd be more careful when you see them. But nothing is bigger than human life. And that's what we're really asking you to look out for.

CycleSafe

The Governor's Office of Traffic Safety

Editorials

THE EMG MACHINE MYSTIQUE

Nonphysicians are still attempting electromyography, despite opposition from such concerned organizations as the American Medical Association and the Academy of Electrodiagnosis and Electromyography. Worse, we've learned that some physicians support this practice. We must assume that they lack familiarity with this examination and the diagnostic skills it requires.

Some misunderstanding may begin with the machine itself. Clearly of the electronic age, it may appear to be more responsible for the results than its operator. I am frequently asked, "How reliable is the EMG?" I often reply, "As reliable as the stethoscope." Indeed, the EMG machine has more in common with the stethoscope than with the EEG or ECG machine. There are no standard electrode placements; there is no continuous permanent recording; the wave forms are not repetitive. Much as we recognize that a stethoscopic examination performed by a technician for interpretation by the cardiologist is unfeasible, so should we be aware that the delegation of electromyography to nonphysicians is unacceptable.

The electromyographer must know where to look as well as what to look for. The procedure is conducted within the form of an examination. A differential diagnosis must be formed, necessitating review of the clinical picture. Initial decisions are then made regarding selection of areas for exploration. The plethora of muscle, nerve segments, and procedures for investigations precludes the possibility of a "complete EMG," even for one extremity. As he navigates a mental flow-sheet with course alterations dictated by the findings, the physician must be intimately familiar with the disease states and their effects on the structures he is investigating. Some intimacy with the possible findings is helpful too, as signals must be firmly identified within the tenth of a second of their appearance on the oscilloscope screen, and their significance judged on the spot. Finally, since electromyography is uncomfortable and patient tolerance is limited, the diagnostic pathway should be as direct and decisive as possible.

Performance of such a study, in my opinion, is certainly the practice of medicine, and probably presents one of its most complex and demanding challenges. Its reliability varies precisely with what lies between the ears of the examining physician. Preferably, his competence should be acquired by supervised experience throughout three years of specialty training.

We are gratified to view a growing core of such solidly trained physicians emerging from adequate programs. We recognize, however, that training is slow, while appreciation of electromyography's value has produced a rapidly expanding demand. If some areas seem to be underserviced, we hope that the medical community will keep in mind that an unreliable electromyographic study is worse than none at all, and that data obtained through a reliable study may be worth traveling for.

Robert D. Sine, MD, Houston, President, Texas Physical Medicine and Rehabilitation Society.

Get Your Brand of Continuing Medical Education at the AMA's Annual Convention, June 26-30, 1976

Dallas is many things to many people—a center of high fashion, finance, brainpower, big money, sports events, conventions, art, theater....

But, after this June's Annual Meeting, for you Big D is going to stand for Continuing Medical Education—the highest quality C.M.E. and the widest assortment of C.M.E. you've ever experienced!

This meeting features new and/or expanded methods of teaching both inside and outside the classroom. You can spend every day participating in several types of learning situations. For example, there will be audio and tape demonstrations; computer-assisted instruction; pre- and post-tests for self-evaluation. In addition, there will be "hands on" manikin practice and many opportunities to participate in small group discussions or to consult with course instructors and fellow physicians. Naturally, we're repeating a popular feature—medical motion pictures. This year, there will be 30—all scheduled for your convenience.

C.M.E. for Credit—and most of it, except for postgraduate courses, free

To help you fulfill C.M.E. requirements for the AMA Physician's Recognition Award and your state or specialty society, this Annual Meeting offers many opportunities—113 in fact—to earn Category 1 credits. You'll have your choice of 57 postgraduate courses and the majority of 47 scientific sessions are classed for Category 1. Hour-for-hour credit will also be given at the Live Teaching Clinic, Pulmonary Function, Dialogue, and at the 8 telecourses offered in the Convention Center and the Dallas hotels. (The AMA will provide you with a certificate of attendance; make sure you report your credits to your state or specialty society.)

Other Highlights

A majority of physicians regard the exhibit area as one of the most important features of AMA meetings. If you happen to be one who values this one-to-one peer communication with exhibitors, Dallas won't disappoint you. There will be 300 exhibits, evenly divided between scientific and industrial. Last, but not least, is the 18th National Conference on the Medical Aspects of Sports. Every year it gets bigger and better—you won't want to miss this year's Conference.

How to fill post-Convention hours, if you have an ounce of energy left

If you've never been to Dallas, you're in for some surprises. Even though you'll see some Texas-style hats and hear quite a few "Y'all's," Dallas is neither typically Western nor typically Southern. It is simply Dallas—a city of fashion, style, flair, fun, and even, grace.

The AMA Auxiliary is planning many events during the Convention. No need to list them here for you can receive the details by contacting the AMA by phone or address as shown below.

Dallas offers a potpourri of entertainment to suit every taste and lifestyle. For animal lovers, there's a Lion Country Safari and a great zoo. If you've never seen a rodeo, don't miss the Mesquite Championship Rodeo. It will give you plenty to talk about! There's a fantastic theatre center and numerous museums for culture devotees. For those who like it swinging and festive, there are clubs, cabarets, and corner pubs. And shopping! Dallas boasts you can find everything from his and her airplanes to unique $5 gifts. If you've ever seen the Neiman-Marcus catalog, you know that's not an idle boast. Oh, one word about the restaurants: don't come expecting to diet. Dining out in Dallas is an adventure for both the novice and gourmet!

For further information about the courses, sessions, hotel-motel reservations, and AMA Auxiliary activities, please write or phone to:

American Medical Association/Department of Registration Services
535 North Dearborn Street/Chicago, IL 60610/(312) 751-6187

Letters

TMF Fights for Us

Dear Ms. Baker:

The forthcoming Annual Session will provide an opportune time for TMA members to learn more about Texas Medical Foundation, another physician organization created by TMA.

TMF is the socioeconomic advocate for the private practicing physician, a separately incorporated entity which, by its articles of incorporation, can perform on behalf of the private practitioner in ways the TMA cannot perform.

Impetus toward the formation of TMF was provided by a committee of young doctors, each in practice less than five years, who demanded that TMA fight for them in the socioeconomic arena. TMA countered that its charter prevented it from functioning as they expected. These young physicians and others with a similar awareness began to explore ways to respond to those needs.

At the same time, TMA's Council on Tax-Financed Health Care was repeatedly finding itself at the same disadvantage each time it tried to represent private doctors in disputes with governmental health care programs. Representatives of those programs always came equipped with *their* computer-collected data, and physicians had no data with which to refute the contentions that further intervention into the patient-physician relationship was justified and necessary. Clearly, a data base collected and controlled by private physicians, and thereby assured of being accurate and properly interpreted, was and is an absolute necessity if we are ever to argue and fight effectively for the private physician.

TMA responded to these needs by creating TMF. TMF is controlled by private practicing physicians. More explicitly, it is governed by its corporate members, who are members of the TMA and Texas Osteopathic Medical Association Houses of Delegates. Membership has been open to TOMA members since December 1974. The TMF board of directors is elected by and from the corporate members of TMF. In short, the delegates to TMA and TOMA, fellow private practitioners, are in control of TMF. TMF officers are elected by and from the TMF board of directors.

TMF represents physicians effectively, and has sufficient clout to influence government programs relative to physician needs and concerns.

The TMF Physician's Office System (POS) will generate our own computerized data base to strengthen our position in any future negotiations while improving the efficiency of each participating member's office functions.

TMF can contract only on a fee-for-service basis to set up systems for review of medical services. The TMF Texas Admissions and Review Program (TARP) is such a contract; ie, the State Department of Public Welfare and Blue Cross-Blue Shield paid TMF a fee to pay well-qualified private practitioners to set up the criteria for conducting quality medical care review. (TMF was not permitted to set up the criteria for the length-of-stay parameters, but it *did* set up criteria for quality of care.)

Before TARP, all review was done by physicians without compensation, and the other review expenses (secretarial, etc) were paid by hospitals out of their general funds, forcing up hospital overhead and costs to patients. Now, review costs will be paid by the agency *requiring* the review—not hospitals—rather than making patients pay for it and blaming the rising costs of hospitalization on the medical profession.

If you fear your elected delegates to TMA and TOMA who fight for your rights and theirs to private practice—then, and only then, should you fear TMF. If you don't trust TMF leadership, replace it. If you seek more understanding of what is before us all, then attend the TMA House of Delegates sessions, attend the special reference committee meetings, and watch your leadership in action. Once you see your representatives fighting for you, your fears will disappear. I must say it is my heartfelt conclusion that you need not fear TMF, especially if you get involved in the fight and keep close tabs on your representatives.

If enough of us join TMF, Texas physicians will acquire the clout they have so desperately needed and so pitifully lacked in the fight with the forces of socialization. This is the best shot that we've had in years. If we blow it, the results will be disastrous, and we then will deserve the contempt of our private patients when their care suffers under socialized medicine.

Ben R. Keller, MD, Arlington.

Prevailing Area Charge by Whom?

Dear Ms. Baker:

Since you have mentioned the concept of *geographical area prevailing charge,* (Who Checks Up On Government? *Texas Medicine,* April 1976, p 140) I would like to point out that as far as I can determine, I am the only anesthesiologist who has *ever* practiced within 70 miles of Paris, Texas. At present, the nearest private practicing anesthesiologist is in the Dallas area (100 miles). Could it be that *prevailing charges* in my area are based on charges generated by nurse anesthetists? If not, then the *prevailing charge* figures must be imaginary. They are certainly not based on Dallas figures. Does the TMA realize that nurse anesthetists in Dallas are being reimbursed at higher rates by Medicare than I am?

Geographical inequities are but a small part of my concern. I'd like for the public to know that Medicare has reduced payment to me, for similar services, during the past two years, by about 25%. My patients are automatically led to believe (by Medicare) that this difference represents an overcharge on my part. This is how Medicare and "Big Brother" are teaching patients to mistrust their physicians.

Tom F. Bryant, MD, Paris

Working with others to solve problems

A year . . . What a year! I have spent it working with others to develop solutions to our problems, and it has been a privilege.

Work . . . What an enormous amount has been done! The professional liability insurance crisis, the battle for a single statewide PSRO, and our determination to maintain physician influence in utilization review are only a few situations that have made TMA's leaders the hardest working people I know. We had two special sessions of the House of Delegates; a commission has been appointed to study professional liability insurance; a Joint Underwriting Association assures availability of insurance; we can now cite hard data on Texas physicians' experience with malpractice suits, coverage, costs, etc; an intensive educational campaign has generated public interest and support.

Work . . . This was the year that the TMA fulfilled its promise to take the Secretary of HEW to court to challenge the "arbitrary and capricious" regulation designating nine PSRO areas in Texas—and won!

Work . . . Even if Texas is renamed a single PSRO area, utilization review is here to stay. The quality of work that we put into UR planning will determine the quality of care our patients get when UR goes into effect. Within TMA, the nitty, gritty, tedious preparatory work has begun.

Others . . . Others make life worth living and—take it from an expert—others make a TMA president's life just plain possible. I wish I could list every person who has my everlasting gratitude!

Others . . . Governor Dolph Briscoe, the Medical Professional Liability Study Commission; the Councils on Medical Legislation and Communication; the Committee on Professional Insurance; indeed, all the Association's officers, boards, councils and committees have been enormously helpful and deserve the highest praise.

Others . . . The staff of the legal counsel has provided invaluable guidance and worked incredibly long and hard for us. And of course, without the administrative staff, TMA's wheels would hardly turn at all.

Solutions . . . Solutions are plentiful; just about anybody will offer one. Solutions, however, have a way of spawning their own problems, and the cycle begins anew. For every problem, TMA leaders try to choose the best of many possible solutions, recognizing that each one is temporary but hoping that each good choice will pave a little more of the path for our successors.

Problems . . . Any problems I may have faced as your president are about to be passed on to a successor who, working with others, will seek the best solutions.

Mine to keep . . . the thrill of being chosen to serve, the satisfaction of having fought with every resource, the keen joy of winning a few battles, and the wonderful friends who have helped make this year a truly rewarding one.

Nym L. Barker

Nym L. Barker, MD, President,
Texas Medical Association.

Jun76

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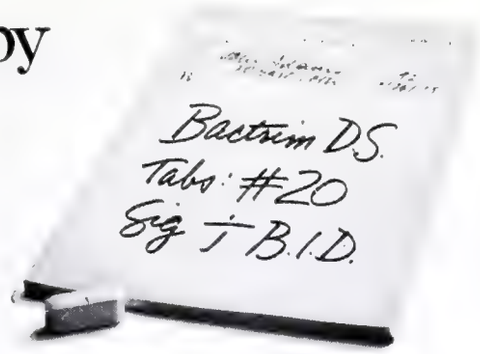

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Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Bactrim™ DS
(160 mg trimethoprim and 800 mg sulfamethoxazole)
Double Strength tablets
Just 1 tablet B.I.D.

Bactrim™
(80 mg trimethoprim and 400 mg sulfamethoxazole)
2 tablets B.I.D.

For chronic or frequently recurrent cystitis and pyelonephritis due to susceptible organisms.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections. The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **Data are insufficient to recommend use in infants and children under 12.**

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) every 24 hours
Below 15	Use not recommended

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole — bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.

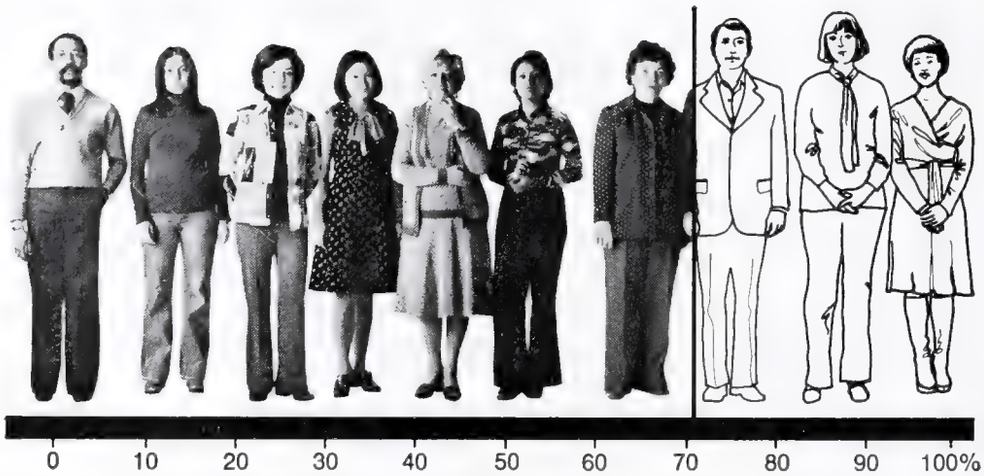
Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole; fruit-licorice flavored — bottles of 16 oz (1 pint).

ROCHE

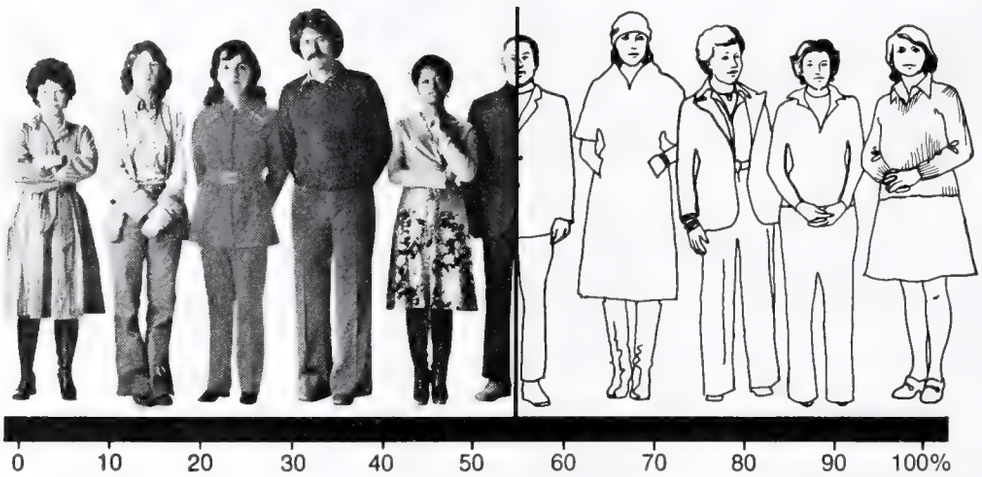
Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

In a multicenter study of patients with chronic or frequently recurrent urinary tract infections

Bactrim was 27.2%* more effective than ampicillin in keeping patients infection-free for 8 weeks.†



Bactrim–70.5% of 78 patients infection-free at 8 weeks.



ampicillin–55.4% of 74 patients infection-free at 8 weeks.

*This percentage is arrived at by the statistical method of dividing the difference between Bactrim and ampicillin results (15.1%) by the percent of ampicillin results (55.4%).

†Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

Double Strength tablets Just 1 tablet B.I.D.

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Please see summary of product information on preceding page.

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Texas Medicine
VOL 72 JUNE 1976

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ON THE COVER

While awaiting kidney transplants, some children must undergo regular dialysis. Texas now has a facility specifically designed and staffed for the hemodialysis of small children. The techniques and problems associated with this procedure are described in the article beginning on page 37.

NEXT MONTH

In July we will begin publishing comprehensive review articles prepared in cooperation with Texas medical schools. The first two, dealing with cardiopulmonary emergencies, are from The University of Texas Medical Branch.

Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct nontherapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

P·M·A
Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D. C. 20005

NEWS

AMA annual convention scheduled in Dallas this month

Dallas will serve as host city to the 125th Annual Convention of the American Medical Association June 26 - July 1.

Continuing medical education will provide a major thrust of the meeting's activities with new and expanded teaching methods being implemented. There will be audio and tape demonstrations, computer-assisted instruction, pre- and post-tests for self evaluation, "hands on" manikin practice, and many opportunities to participate in small group discussions. There are 30 medical motion pictures scheduled throughout the convention.

Physicians will be able to choose from 57 postgraduate courses and 47 scientific sessions.

There are many other attractions including 300 exhibits, the 18th National Conference on the Medical Aspects of Sports, the Exhibition of Physicians' Art, and the 60th Annual Golf Tournament scheduled for Brook Haven Country Club.

The AMA House of Delegates will convene June 27 with a full agenda of business items.

In addition, the 53rd annual convention of the AMA Auxiliary will be held June 27-30. The meeting will feature a combination of business sessions, educational programs, and social events.

All AMA members are encouraged to attend the convention. Complete program listings are included in the April 19 *Journal of the American Medical Association.*

Delegates discuss review programs, professional liability, continuing medical education at May meeting in Dallas

Meeting during the 1976 Annual Session in Dallas, the Texas Medical Association's House of Delegates endorsed seven principles relating to health care review programs. The action followed recommendations made by a special reference committee studying the issues of utilization review, quality assurance, and professional standards review organization (PSRO).

The delegates adopted the following premises.

- The design and implementation of these (review) programs should be controlled by physicians.
- Provisions should be made so that the review mechanism is the same for all programs to which it is to apply.
- Program design, including all of the details of the program, should

allow for change and flexibility.

- Adequate trial periods of performance should be accomplished prior to linkage with claims processing.
- Programs must be flexible enough to take into account local circumstances and initiative.
- As with any organization, one developed for professional and claims review purposes must have a well delineated, effective, and accepted line of authority, responsibility, and accountability.
- Since at present most quality review programs are institutionally based, there should be joint effort, consensus, and support between administrative, board, and professional elements.

The delegates reiterated the previous position of the House of Delegates that it is the individual's choice and right as to whether or not he will participate in any review mechanism.

In addition, the delegates voted to endorse and support the Texas Medical Foundation and its Texas Admissions Review Program (TARP). TMF was requested to develop, through TARP, a single, uniform, across-the-board utilization review program for the whole state of Texas, with enough flexibility to adapt to all problems.

In regard to PSRO, the House of Delegates restated its support of the Texas Institute for Medical Assessment (TIMA) and commended the Board of Trustees and the Office of Legal Counsel for the victory in the suit challenging the Secretary of HEW's designation of PSRO areas in Texas.

Professional liability

At the request of both the outgoing and incoming presidents, the House of Delegates established a special ad hoc committee to deal with the isue of professional liability insurance. Three specific charges were approved for the committee's work: (1) to coordinate and implement the association's multifaceted approach to ease the professional liability insurance crisis; (2) to not duplicate present activities of standing councils and committees or to assume authority for responsibilities currently delegated by the Constitution and By-laws to other groups; and (3) to present a progress report to the House of Delegates this fall and a final report at the 1977 Annual Session. The committee will be discharged at the time of its final report.

NEWS

The ad hoc committee will be composed of the incoming president, vice president, president elect, immediate past president, the two physician appointees to the Texas Medical Professional Liability Study Commission, and the chairmen of the Councils on Medical Legislation and Communication, the Committee on Professional Insurance, Board of Trustees, and TEXPAC. In addition, the committee will include a representative from the Texas Orthopaedic Association, the Texas Society of Anesthesiologists, the Texas Society of Plastic Surgeons, and the Texas Association of Neurological Surgeons.

Upon recommendation of the reference committee which studied proposals pertaining to compulsory continuing medical education as a prerequisite for TMA membership, the delegates adopted a substitute resolution which called for the development by TMA, in cooperation with its component medical societies and specialty organizations, of a formal program for the accreditation of continuing medical education. Guidelines are to be established by the Council on Medical Education and Hospitals and the Board of Trustees. The delegates also directed the Council on Medical Education and Hospitals to accomplish feasibility studies directed toward defining mechanisms for continuing education requirements for membership in TMA and requested the council to present its report and recommendations at the next meeting of the House of Delegates.

Other actions

The delegates unanimously adopted a resolution which pledged TMA's full support to protecting the populace from swine influenza by actively participating in the establishment of priorities, planning for and administering the vaccine in the private sector, and supporting and/or assisting public health officials in their immunization efforts.

Several key association officers were elected by the delegates including Dr. John M. Smith, Jr., San Antonio, president elect; Dr. Sheridan S. Evans, McAllen, vice president; and Dr. Sam N. Key, Jr., Austin, and Dr. Walter A. Brooks, Quanah, trustees.

Dr. L. S. Thompson, Jr., Dallas, was installed as president.

Dr. James E. Peavy was commended for his 16-year tenure as Commissioner of Health.

Dr. Joe T. Nelson was named as recipient of the TMA Distinguished Service Award. The delegates cited the many hours of dedicated service that Dr. Nelson has spent on behalf of his profession and community.

Elected to member emeritus status were Dr. Charles Willingham, Tyler; Dr. Charles P. Hardwicke, Austin; Dr. Max E. Johnson, San Antonio, and Dr. Paul R. Harrington, Houston.

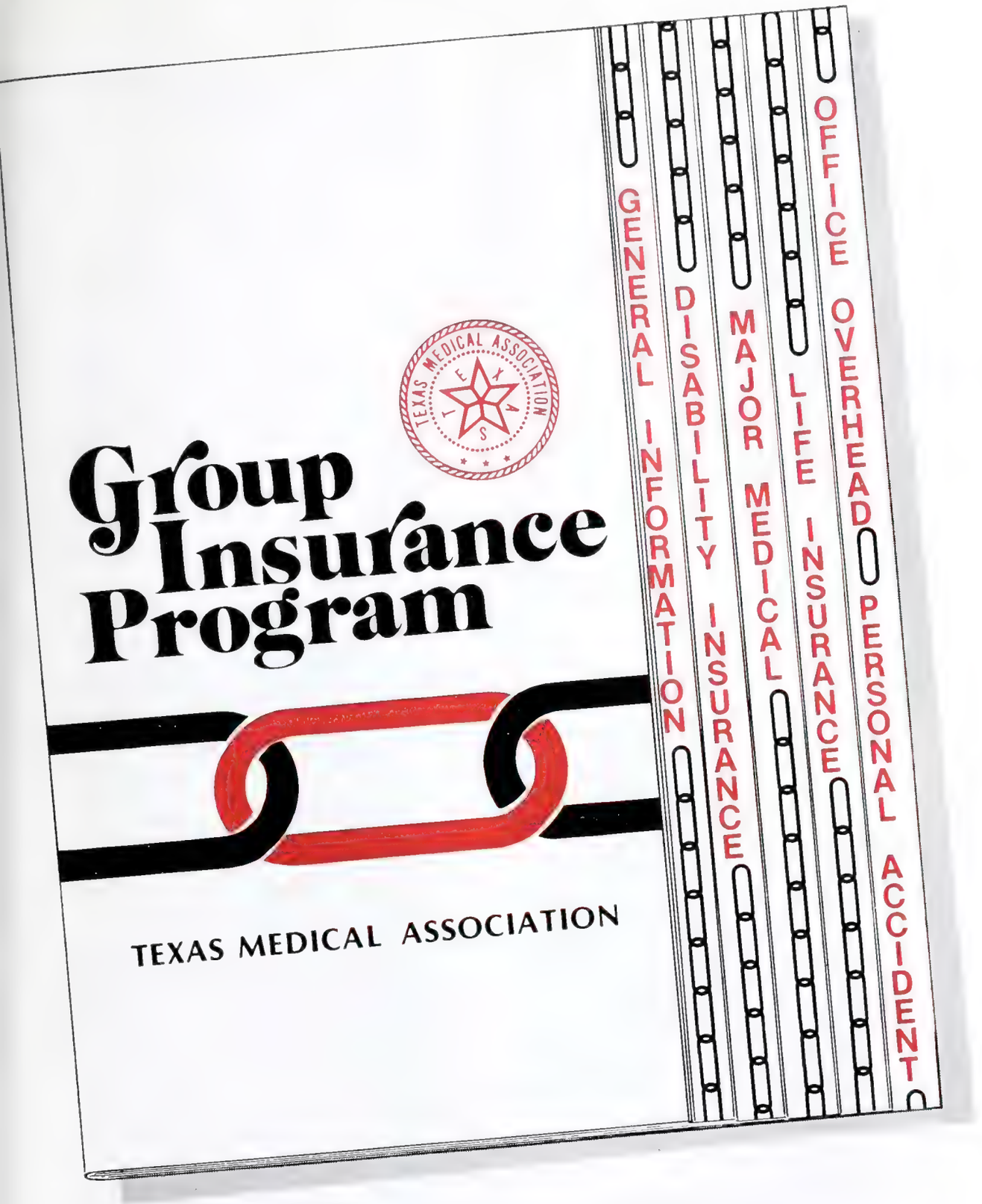
In addition, the delegates commended Donald M. Anderson, TMA assistant executive director, for his contributions during his 20 years with the association.

Medical foundation reports progress

The Central Texas Medical Foundation has had an outstanding year in its recruitment of qualified physicians in training, according to Dr. Earl B. Matthew, director of medical services and education for the foundation.

Dr. Matthew reported there were 204 applicants for the 20 first year postgraduate positions in internal medicine, pediatrics, family practice, and the flexible internship.

The Central Texas Medical Foundation was created by the Travis County Medical Society in 1972 for the purpose of solving some of the problems of health care in Central Texas.



This brochure was recently mailed to members.

Following our custom, the brochure is lengthy and specific as far as benefits and restrictions are concerned so that you will have sufficient information on which to pursue your insurance requirements.

Remember, when an insurance claim is paid is a poor time to learn the benefits you have — or worse, what you do not have.

For information or service
contact
Insurance Service Office
TEXAS MEDICAL ASSOCIATION
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Austin, Texas 78701

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NEWS

New flu vaccine undergoing study

Clinical studies were to be conducted with the new swine virus vaccines in late April to determine the proper dose and schedule for vaccine in children, according to a statement released by the American Academy of Pediatrics' Committee on Infectious Diseases.

The statement supported the federal plan to immunize virtually the entire population against the swine flu virus because of "(1) the evidence of person-to-person spread; (2) the absence of protective antibodies among the great majority of our population; (3) the possibility of a serious national epidemic; and (4) the early detection of this new virus."

The statement also pointed out that experience with influenza virus vaccines in infants and children is limited. Older influenza virus vaccines were recommended only for those children in high risk groups because of the heightened reactivity and uncertainty of proper dosage.

Because of this lack of experience, the committee called for carefully planned and executed clinical studies to provide information on which to base recommendations for vaccine utilization in the pediatric population. Physicians and other health personnel will receive this information and recommendations as soon as they become available.

AMA reaffirms position on advertising

A statement on advertising and solicitation by physicians, reaffirming long-standing policy, was adopted by the American Medical Association's Judicial Council at a meeting in San Francisco in April.

The council said the AMA's *Principles of Medical Ethics* "are intended to discourage abusive practices which exploit patients and the public and interfere with freedom in making an informed choice of physicians and free competition among physicians."

In its statement, the Judicial Council points out that the principles "do not proscribe advertising; they proscribe the solicitation of patients."

Physicians may furnish information to the public through "the accepted local media of advertising or communication which are open to all physicians on like conditions," the council said. As examples it gave office signs, professional cards, dignified announcements, telephone directory listings, and reputable directories.

The council said the information could include the physician's name, type of practice, office location, office hours, and other information "that will enable people to make a more informed choice of physician."

If the physician chooses to supply fee information to a reputable directory, the council stated, the "data may include his charge for a standard office visit or his fee or range of fees for specific types of services, provided disclosure is made of the variable and other pertinent factors affecting the amount of the fee."

The council defined solicitation as "the attempt to obtain patient by persuasion or influence using statements or claims which (1) contain testimonials; (2) are intended or likely to create inflated or unjustified expectations of favorable results; (3) are self-laudatory and imply that the physician had skills superior to other physicians engaged in his field or specialty of practice; or (4) contain incorrect or incomplete facts, or representations or implications that are likely to cause the average person to misunderstand or be deceived."

The Texas Medical Association's Board of Councilors has fully supported the AMA in its efforts to uphold these principles which have a historical and traditional basis.

Examiners approve licensure rule

The Texas State Board of Medical Examiners has approved a rule relating to reciprocity licensure.

The new rule states that after Jan 1, 1977, the board will not accept for licensure by reciprocity "licensees of other states who were licensed in those states by examination administered after Jan 1, 1977, unless such license is based upon passage of the FLEX Examination, provided, however, that this rule will not be applicable to reciprocity applications from licentiates of Canadian provinces."

MCAT to be replaced

The Medical College Admission Test (MCAT) will be replaced in 1977 by a new test that will emphasize skills and problem-solving instead of simple factual knowledge.

The new test is the result of three years of development by the Association of American Medical Colleges.

"This is a radical departure from anything ever done before" in admissions testing, according to James L. Angel, director of AAMC's Medical College Admissions Assessment Program, which developed the test.

Some important features of the new exam include the following: (1) Science knowledge has been de-emphasized, so that applicants with academic backgrounds in nonscience areas will not be at a disadvantage. (2) There will be a separate part of the exam to test "problem-solving ability," with a separate score for that section reported to medical schools, to help applicants with disadvantaged educational backgrounds, such as minority-group students. (3) The old "general information" portion of the MCAT has been eliminated; medical school applicants will no longer be expected to know anything about opera or English literature, for example. (4) Mathematics questions will no longer require a knowledge of formulas and equations, but instead will require a grasp of logical math concepts. (5) Some questions in the new test will "simulate" clinical situations, in that test-takers will be asked to make decisions in "medically-related topics."

Harris County wins publication award

The Harris County Physician, the bulletin of the Harris County Medical Society in Houston, was one of two top county medical publications selected in national competition by Sandoz Pharmaceuticals.

The winning publications were selected for their appearance and editorial content. Each publisher will receive $500 and a plaque. Dr. L. Rodney Rodgers is editor of the Houston publication.

International group chooses Houston as headquarters

The International Association of French-speaking Anesthesiologists has chosen Houston as its U S headquarters.

The association has several goals: to provide American anesthesiologists with information regarding progress made and published in French-speaking countries related to anesthesia; to establish exchange programs between American, French, and Belgium anesthesiologists and/or departments of anesthesiology; and to organize in the United States Franco-American symposiums.

Houston has been chosen for the first symposium to be held in 1977.

Membership applications may be obtained by writing to the association, 7603 Bellfort, Suite 130, Houston 77061.

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provide 8 to 10 hours of sustained effect in the prophylaxis of angina pectoris*

Isordil Tembids Capsules offer a *convenient* maintenance regimen for round-the-clock protection against attacks of angina pectoris. Because of their sustained action they are especially useful in the treatment of nocturnal angina. The frequently satisfactory b.i.d. dosage regimen encourages patient *compliance*.

***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Possibly" effective: When taken by the oral route, Isordil is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris. Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.
Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.
Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.
Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.
Dosage: Every 6 to 12 hours according to need.

Consult direction circular before prescribing.

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Financial workshops slated

"Financial Control of Your Medical Practice" is the title of four half-day workshops to be co-sponsored this month by the Texas Medical Association and the American Medical Association.

The workshops are scheduled for June 15 in Fort Worth, June 16 in Dallas, June 17 in Houston, and June 18 in San Antonio. All four workshops will be from 1 pm to 5 pm.

The workshops will be conducted by Conomikes Associates, a nationally recognized medical practice consulting firm, also known for their two-day workshops presented for several national specialty societies. Workshop topics include daily monitoring of accounts receivable, better use of ledger cards, petty cash, reducing billing costs, collection policies, and better cash flow.

Each workshop is limited to 35 physicians. No office personnel will be allowed to attend. The registration fee for a workshop is $62.50 and includes a take-home notebook.

Registration fees (indicating the city of the desired workshop) or inquiries should be directed to Paul D. Gray, TMA, 1801 N Lamar Blvd, Austin 78701.

Washington state to require continuing education

The Professional Licensing Division of the Washington State has announced upcoming continuing medical education rules for physicians.

The Washington State Board of Medical Examiners was authorized to establish rules for mandatory continuing education by the state legislature in 1975. The new rules will affect about 10,000 physicians licensed in the state. Of that total 6,000 are in active practice. The remainder are either retired or living in other states.

The proposed rules would call for 50 credit hours of continuing education each year.

Board announces exam results

The Texas State Board of Medical Examiners has reported that 52 persons took the clinical exam in December, 1975.

Of this number, 33 were repeats only. Four persons failed. A total of 129 persons took the FLEX exam. There were 90 foreign graduates, 23 Texas graduates, and 16 out-of-state graduates who took the FLEX. Forty-eight persons failed the FLEX, and three who took the Jurisprudence only failed that exam.

In additional recent actions, the board approved 185 reciprocity applications for licensure, denied licensure to one reciprocity applicant, and deferred action on two others. Five duplicate licenses were issued.

Blue Cross reports delays overcome in profile processing

Blue Cross-Blue Shield of Texas has reported that requests by physicians for customary and prevailing profiles are being processed in ten to 14 days' time.

Dr. Louis W. Conradt, vice president and medical director, said there were initial profile calculation problems which delayed response time last fall. However, he said that since November, the Reasonable Charge Department has had weekly access to the computer, cutting the response time to no more than ten to 14 days.

The report came in response to allegations by the Texas Medical Foundation that some of its member physi-

cians felt they had waited unnecessary lengths of time to receive their profiles. Subsequently, the foundation offered to request the profiles from Blue Cross-Blue Shield for all TMF physician members and to record the time required to receive the information.

NEWS

Study reveals little incidence of unjustified surgery

Using a technique hailed by federal officials as "the most comprehensive assessment study in the country," a New York group found that the incidence of unjustified surgery in 12 Brooklyn-Long Island hospitals was "less than 1%."

The findings are reported in the March issue of the journal of the Medical Society of the State of New York. The study extended over a period of several years, with the aid of other groups, and included 1,900 diagnoses and 3,800 procedures.

Committee to study medical discipline

The medical profession's self-regulating and self-policing mechanisms will be studied preparatory to overhaul and expansion with the appointment by the American Medical Association in March of a new Ad Hoc Committee on Medical Discipline.

The committee will study the disciplinary mechanisms of medical associations and determine the effectiveness of medical discipline; recommend appropriate modifications in medical self-regulation and appropriate legislation and governmental regulations; recommend improvements in state legislation and licensure board regulations; review the procedures by which hospitals limit privileges within the individual physician's competence, and study the relationship between medical discipline and malpractice claims.

Named by the AMA Board of Trustees as chairman of the new committee is Dr. Charles Smeltzer, of Knoxville, Tenn. Dr. Smeltzer is a former chairman of the AMA Judicial Council and has long been working with problems of medical ethics and medical discipline.

Dallas' physician's assistants rank high nationally

The second class of physician's assistants graduated by The University of Texas School of Allied Health Sciences at Dallas has placed in the upper 20% of similar programs throughout the United States, according to Allied Health Dean John Schermerhorn.

"We had 13 candidates from the 1975 class who took the certifying examination of the National Commission on the Certification of Physicians' Assistants and they scored tenth out of 52 programs participating," he said.

The top scorer of the Dallas students, Deborah Lawrason, also scored very near the top of all 1,400 students who took the tests, Dr. Schermerhorn added.

Insurance directive issued

Commissioner of Insurance Joe Hawkins issued a directive in March to require all physicians who cannot obtain insurance in the private licensed market to submit an application to the Joint Underwriting Association (JUA) rather than a surplus lines carrier.

In giving his reasons for the directive, Commissioner Hawkins stated that the JUA is part of the "admitted market" and according to the surplus lines provisions of the Insurance Code, applications must be submitted to the JUA prior to turning to the surplus lines market. He also stated that he has serious reservations about the stability of the sur-

plus lines companies and about the policy forms which they are currently using. He further expressed the opinion that the JUA policy and coverage is superior to that of the surplus lines companies.
Although strong arguments are coming from surplus lines agents, Commissioner Hawkins indicated that he planned to stand by his position. The agents are considering appealing the matter to the full Board of Insurance on the grounds that the directive falls within the definition of a "rule" under the new Administrative Practices Act and that this rule was not promulgated after due notice to interested parties.

Tuberculin test required for school personnel

According to a statement by the Division of Tuberculosis Control of the Texas Department of Health Resources, state law requires school personnel to furnish evidence to the governing body of a public school that they have been examined for tuberculosis.
The certificate furnished the school board must be signed by a person licensed to practice medicine in the state. The tuberculosis control services is not responsible for doing the examination, nor is it responsible for signing the certificate.
If the person is determined to be a tuberculosis suspect or to have tuberculosis, he must be reported as such. Follow-up may be provided by the state tuberculosis control services. School personnel who are placed on prophylactic medication or treatment may receive supervision and drugs from the Division of Tuberculosis Control.
Following completion of prophylaxis or treatment, subsequent examinations made to comply with the state law will not be the responsibility of the division.

Preliminary approval granted for UTMB outpatient expansion

A new, five-story, 175,000 square foot Ambulatory Care Center and a separate but associated parking facility for approximately 400 cars at The University of Texas Medical Branch at Galveston, received preliminary approval by the UT System's Board of Regents at its March 26 meeting.
Board action to allow the medical branch to proceed with preliminary plans and specifications and appointment of project architects followed the report of a feasibility study conducted by Medical Planning Associates of Los Angeles, Calif. Regental action will be required following completion of the preliminary plans.
The report documents a national trend toward dramatic growth of institutionalized outpatient care and supplies evidence that ambulatory clinics provide the most cost-effective method for medical care, forming the foundation of the Health Services System in the United States.

Rocky mountain spotted fever incidence range enlarging

Rocky Mountain Spotted Fever, which had a startling increase in Texas last year, also is showing another pattern of concern to theTexas Department of Health Resources —the range of the disease and infected ticks is enlarging.
During the 11-year period of 1964 through 1974, a total of 105 human cases of Rocky Mountain Spotted Fever was officially reported in Texas. The vast majority of cases had contact with ticks in the eastern and northeastern areas of the state. In 1975, 34 human cases were reported—one-third of the total number reported for the entire preceding 11 years. The apparent spread of cases into new areas, in addition to

NEWS

the hazardous Northeast and East Texas, alarms public health officials, and a statewide surveillance program is being conducted by the Department of Health Resources. According to health officials, the increase in reported human cases may in part be due to better recognition of the disease. However, they emphasize that the current situation establishes the need for continued and expanding surveillance.

Baylor receives grant to pursue retinal research

Baylor College of Medicine, Houston, has been awarded a $750,000 grant from the Sarah Campbell Blaffer Foundation for the establishment of the Sarah Campbell Blaffer Chair of Ophthalmology in the area of retinal research.

According to Mrs. Kenneth Dale Owen, Mrs. Blaffer's daughter, her mother's greatest pleasures were those made possible through her sight. From her birth in 1886 to her death in 1975, she was an energetic collector of beauty and art. It was her appreciation of art and the belief that it should be shared visually with others that guided Mrs. Blaffer to her interest in ophthalmology.

In making the announcement, Dr. Michael E. DeBakey, Baylor president, said the college is seeking to recruit a recognized leader in retinal research and ocular pathology to strengthen Baylor's programs in ophthalmology.

Isoniazid therapy linked to liver disease

According to the Texas Medical Association's Committee on Tuberculosis and Chronic Respiratory Diseases, liver disease can occur in patients receiving isoniazid therapy to prevent tuberculosis.

Age is the predominant factor that seems to increase the risk of liver disease among subjects receiving isoniazid. Progressive liver damage is observed rarely under 20 years of age, up to .3% at ages 20-34 years, up to 1.2% at 35-40 years, and up to 2.3% at 50 years and over. Daily use of alcohol may also increase the risk. The frequency may vary from place to place and time to time, depending on factors not known.

The liver disease that develops is not the result of any particular manufacturing process or contaminant. The development of liver disease is not predictable in any individual patient. The morphologic pathology of isoniazid liver disease, as presently understood, does not permit its ready differentiation from viral hepatitis. Routine monitoring by laboratory tests (SGOT, SGPT) is not useful in predicting hepatic disease in isoniazid recipients.

The use of isoniazid with appropriate safeguards must be based on a comparison of the benefit of preventive therapy with the risk of hepatic injury. For positive tuberculin reactors under 35 years of age, the benefit of isoniazid therapy in preventing tuberculosis clearly outweighs the risk of hepatitis, even in the absence of additional risk factors. In positive tuberculin reactors 35 years and over, the risk of hepatitis precludes the routine use of preventive therapy. However, the presence of additional risk factors may increase the likelihood of subsequent tuberculous disease sufficiently to warrant offering preventive therapy regardless of age.

No significant changes are made in the recommendations for preventive therapy for the following groups, listed in order of priority:

a. Household members and other close associates of persons with re-

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cently diagnosed tuberculous disease.
b. Positive tuberculin reactors with findings on the chest roentgenogram consistent with nonprogressive tuberculous disease, without positive bacteriologic findings, and without a history of adequate chemotherapy.
c. Newly infected persons.
d. Positive tuberculin reactors in the following special clinical situations: (1) prolonged therapy with adrenocorticoids, (2) immunosuppressive therapy, (3) Some hematologic and reticuloendothelial diseases, such as leukemia or Hodgkin's disease, (4) diabetes mellitus, (5) silicosis, (6) after gastrectomy.
The only significant change recommended in screening procedures is to include pregnancy as a contraindication to the administration of isoniazid. The contraindications are: (1) previous isoniazid-associated hepatic injury, (2) severe adverse reactions to isoniazid, such as drug fever, chills, rash, and arthritis, (3) acute liver disease of any etiology, and (4) pregnancy.
Five groups were identified for whom preventive treatment is not contraindicated but who should receive special attention: (1) those concurrently using any other medication on a long-term basis, (2) those taking diphenylhydantoin, (3) those who are daily users of alcohol, (4) those who have previously discontinued isoniazid because of possible but not definitely related side effects, and (5) those who may now have chronic liver disease.
No changes are recommended in procedures for monitoring and motivating patients. Monitoring by routine laboratory tests is not useful in predicting hepatic disease in isoniazid recipients and is not recommended. Such tests are mandatory in evaluating signs and symptoms.

NEWS

Texas Medicine editorial wins international award

A *Texas Medicine* editorial by Dr. Daniel Jackson of Houston has won an Award of Excellence from the International Association of Business Communicators (IABC).
IABC awards for communication excellence are among the most prestigious in the field of corporate and organizational communication. Dr. Jackson's editorial, "The Small Beautiful Time Bomb," was judged the best of 42 entries in its category.
The editorial, published in the January 1976 issue, commented on lung disease in former asbestos workers in Tyler.
The award was announced May 24 in Denver during the opening ceremonies of the 1976 IABC conference. Accepting on behalf of *Texas Medicine* and Dr. Jackson was Marilyn Baker, managing editor of the journal and vice president for District 5 of IABC.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST
(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 4/30/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+ 9.1%	−33.0%	− 6.2%	1.3%
Loomis-Sayles Mutual Fund	+ 7.9%	−21.0%	− 3.7%	3.2%
Mercantile Bank Equity Fund	+12.6%	−35.8%	−16.5%	3.5%
Mercantile Bank Fixed Income Fund	+ 4.5%	−13.5%	− 8.6%	7.7%
T Rowe Price Growth Stock Fund	+ 6.4%	−34.1%	− 1.9%	2.1%
T Rowe Price New Income Fund	+ 0.6%	N/A	N/A	8.0%
Stein Roe & Farnham Balanced Fund	+ 8.0%	−24.9%	+ 4.1%	3.1%
Standard & Poor 500 Stock Average	+12.7%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+16.9%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: COMMITTEE APPOINTMENTS. Newly elected State Senator Gene Jones (D-Houston), has been named to the Senate Jurisprudence, Education, and Human Resources Committees. In addition, he has been named chairman of the Subcommittee on Public Health. Sen Kent Hance of Lubbock has been named to the Senate Economic Development Committee. These interim assignments were made after Sen Jones was elected to fill the unexpired portion of former Sen Bob Gammage's term. Gammage resigned to make an unsuccessful try in a special election for Congress.

WASHINGTON: MD ELECTED. A fourth physician takes a seat in Congress with the election of Dr. Ron Paul of Lake Jackson. Dr. Paul won a special runoff election for the seat vacated by the resignation of Rep Bob Casey.

AUSTIN: EXECUTIVE APPOINTMENTS. Recent executive appointments to the Advisory Council on Early Childhood Education include Dr. Paul R. Meyer, Port Arthur; Dr. David S. Dow, Waco; and Dr. George A. Constant, Victoria. Dr. Meyer and Dr. Dow are reappointments. Dr. Constant was appointed to fill the unexpired term of Dr. Jaime Quintanilla. Dr. Emery R. Owens, Prairie View, has been appointed to the Hospital Licensing Advisory Council.

WASHINGTON: GOVERNMENT EXAMINATION URGED. Sen Lloyd Bentsen (D-Texas), recently urged the Senate to approve a bill requiring Congressional examination of each government program every four years to "see whether they are really doing the job they were intended to do." Ineffective programs would have their money cut off. "It has become a common practice here in Washington to keep appropriating more money for a program simply because it existed the year before," Senator Bentsen said, "but the American people are no longer content to idly watch the government haphazardly throw their tax dollars into areas that give the public little or no results."

WASHINGTON: MAC REGULATIONS IMPLEMENTATION DELAYED. The maximum allowable cost drug reimbursement program, against which the AMA has filed suit, was scheduled to begin April 26. However, the deadline has been delayed until Aug 26 by HEW Secretary David Matthews.

WASHINGTON: TORT SYSTEM ALTERNATIVES. Alternatives to the tort system for resolution of professional liability suits were urged by the Supreme Court Chief Justice Warren E. Burger. At a recent conference, he said, "New ways must be found to provide reasonable compensation for injuries resulting from negligence of hospitals and doctors, without the distortion in the cost of medical

and hospital care witnessed in the past few years."

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: FTC ISSUES STATEMENT. In a recent press release, the Federal Trade Commission targeted the AMA for another investigation. This time, the FTC said it was investigating "to determine whether the AMA may have illegally restrained the supply of physician health care services." The FTC said its probe would cover "accreditation of medical schools and graduate programs; definition of fields of practice for physicians and allied health personnel; and limitations on forms of health care delivery inconsistent with a traditional fee-for-service approach." At the end of the press conference FTC officials said, "The existence of an investigation does not imply that violation of the law has occurred." Dr. James Sammons, executive vice president of the AMA, said, "We welcome an airing of the issues." He discussed the tremendous growth in American medicine in the last ten years, noting that there is one physician for every 569 Americans compared to one for every 682 ten years ago. "We have not violated the antitrust laws," he said. "We have, as a matter of record, advocated increases in the number of physicians and health personnel."

WASHINGTON: HSAs CHOSEN. Ninety-five health systems agencies have been chosen by HEW to carry out provisions of the controversial National Health Planning and Resources Development Act. A total of 200 agencies, will be named by the summer. The agencies are responsible for making plans to improve health care in their areas, restrain increases in the health service cost, and prevent unnecessary duplication in accordance with HEW.

WASHINGTON: AMA URGES REJECTION OF NATIONAL WORKMEN'S COMPENSATION ACT. In a recent hearing before the Subcommittee on Labor of the Senate Labor and Public Welfare Committee, the AMA offered its views on S 2018, the National Workmen's Compensation Act of 1975. The AMA stated that the state system is by far the best method to carry out workmen's compensation programs. The AMA pointed out that the states have moved vigorously to improve their laws and to meet the recommendations made in 1972 by the National Commission on State Workmen's Compensation Laws.

WASHINGTON: STATISTICS ON PROFESSION. The average age of AMA members is 48.8 according to data compiled by the AMA Center Health Service Research and Development. For the entire physician population, the average age is 46.2. Of the 379,758 physicians in the United States, 195,916 are under the age of 45. The number of AMA dues-paying members under 45 is 64,800; the number 45 and over is 105,730.

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COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION

The American Medical Association's 125th Annual Convention will take place in Dallas, Jun 26-30, 1976. The meeting emphasizes continuing education and features new and/or expanded methods of teaching both inside and outside the classroom. Other highlights of the meeting will be 300 exhibits, evenly divided between scientific and industrial, and the 18th National Conference on the Medical Aspects of Sports. (For further details, see Continuing Education Courses, pp. 29-32.)

Contact: American Medical Association, 535 N Dearborn St, Chicago 60610.

NUECES COUNTY MEDICAL SOCIETY

Jun 10 and 11 are the dates of the second annual Current Concepts in Respiratory Care Workshop. The workshop will take place at the Master Hosts Inn Beach Theater, 3200 Surfside, Corpus Christi. The program includes the following presentations: chronic lung disease: everything you always thought you knew, but were afraid to ask; the double dilemma of the chronic lunger; the pulmonary accident: a blow to normal function; intubation vs. tracheostomy: methods, devices and complications; the pediatric patient is not a small adult; and others.

Contact: Dr. James E Albright, Pres, Nueces County Medical Society, Box 5280, Corpus Christi 78405.

AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC.

The Bicentennial Cardiovascular Update will take place Jun 17-18, 1976, in Houston. It is presented by the American Heart Association, Houston Chapter, for the American Heart Association, Texas Affiliate, Inc. The Shamrock Hilton Hotel will house the scientific sessions. These include numerous presentations relating to the general themes of prevention of cardiovascular disease, diagnosis of cardiovascular disease, and medical and surgical treatment of heart disease. The scientific program is acceptable for 9 hours, AAFP elective credit. Registration fee for physician members is $40.

Contact: Box 15186, Austin 78761.

CURRENT MEETINGS IN TEXAS

NATIONAL CONFERENCE ON THE MEDICAL ASPECTS OF SPORTS, Dallas, Jun 26, 1976. Presented by American Medical Association Committee on Medical Aspects of Sports, in conjunction with AMA Annual Convention. Discussions on sports injuries reports; back problems of athletes; low back injuries to athletes, a neurological view; women in athletics; medical problems encountered in soccer; what to look for in equestrian accidents; other topics. Luncheon features Roger Staubach, quarterback, Dallas Cowboys. Category I credit, AMA Physician's Recognition Award; 9 hours, AAFP elective. Contact: Dept of Environmental, Public, and Occupational Health, AMA, 535 N Dearborn St, Chicago 60610.

CURRENT NATIONAL MEETINGS

AMERICAN SOCIETY OF INTERNAL MEDICINE, conference on assessing physician performance in ambulatory care, St. Francis Hotel, San Francisco, Jun 18-19, 1976. Drs. Daniel A Nye, immediate past-pres, Federation of State Medical Boards of the US, Inc; John Benson, pres, American Board of Internal Medicine; Carl Goetsch, immediate past-pres, Calif Medical Association are among featured speakers. Registration fee, $85. Contact: 535 Central Tower Bldg, 703 Market St, San Francisco 94103.

AMERICAN SOCIETY OF LAW AND MEDICINE, natl conference on medicolegal implications of patient injury from medical products, devices and drugs, Copley Plaza Hotel, Boston, Jun 21-22, 1976. Faculty of authorities in field of products liability and medical malpractice legal actions, insurance coverage, safety and prevention programs, hospital administration, governmental regulatory agencies. Dean E Donald Shapiro, New York Law School; Honorable Max Rosenn, Circuit Judge of Third Circuit, US Court of Appeals, are featured luncheon speakers. Contact: 454 Brookline Ave, Boston 02215.

For other courses and symposiums, see Continuing Education Courses, pp 29-32.

JUNE

■ AMERICAN COLLEGE OF CHEST PHYSICIANS, TEXAS CHAPTER, Dallas, June, 1976. Dr. CB Shuey, Jr, Sec, 3500 Gaston Ave, Dallas 75246.

■ AMERICAN HEART ASSOCIATION, TEXAS AFFILIATE, INC, Houston, Jun 17-18, 1976, Box 15186, Austin 78761.

■ AMERICAN MEDICAL ASSOCIATION, Dallas, Jun 26-30, 1976. 535 N Dearborn, Chicago 60610.

AMERICAN SOCIETY OF INTERNAL MEDICINE, San Francisco, Jun 18-19, 1976. 535 Central Tower Bldg, 703 Market St, San Francisco 94103.

AMERICAN SOCIETY OF LAW AND MEDICINE, Boston, Jun 21-23, 1976. Dr. Elliot L Sagall, 454 Brookline Ave, Boston 02215.

CANADIAN ASSOCIATION OF RADIOLOGISTS, Quebec, Jun 12-17, 1976. Suite 806, 1440 St. Catherine St W, Montreal, Quebec H3G 1R8.

EYE RESEARCH INSTITUTE OF RETINA FOUNDATION, Boston, Jun 17-19, 1976. Dr. H MacKenzie Freeman, 20 Staniford St, Boston 02114.

INTERNATIONAL CONGRESS ON GROUP MEDICINE, Paris, Jun 21-26, 1976. Domestic Coordinating Body, American Group Practice Association, 20 S Quaker Lane, Box 949, Alexandria, Va 22313.

■ MEDICAL AMATEUR RADIO COUNCIL, Dallas, Jun 25-26, 1976. Dr. Mervin H Grossman, Drawer FF, Mesquite, Tex 75149.

■ NUECES COUNTY MEDICAL SOCIETY, Corpus Christi, Jun 10-11, 1976. Box 5280, Corpus Christi 78405.

ROCKY MOUNTAIN NEUROSURGICAL SOCIETY, INC, Las Vegas, Nev, Jun 13-16, 1976. Dr. Richard H Moiel, Sec, 601 Medical Towers, 1709 Dryden St, Houston 77025.

■ TEXAS STATE BOARD OF MEDICAL EXAMINERS, Houston, Jun 15-17, 1976. Dr. A Bryan Spires, Southwest Tower Bldg, Suite 900, 211 E 7th St, Austin 78701.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 19-22, 1976. Box 456, Sunland Park, NM 88063.

AMERICAN ASSOCIATION FOR REHABILITATION THERAPY, INC, Cleveland, Jul 12-16, 1976. Box 93, N Little Rock, Ark 72116.

AMERICAN CANCER SOCIETY, COLORADO DIVISION, Denver, Jul 16-17, 1976. 1809 E 18th Ave, Denver 80218.

AMERICAN SOCIETY OF ORAL SURGEONS, Chicago, Jul 17-18, 1976. 211 E Chicago Ave, Ste 930, Chicago 60611.

INDIANA UNIVERSITY, Institute for Sex Research, Inc, Bloomington, Ind, Jul 21-30, 1976. 416 Morrison Hall, Indiana University, Bloomington, Ind 47401.

INSTITUTE FOR CONTINUING EDUCATION, Heidelberg/Mainz/Hamburg, W Germany, Jul 13-24, 1976. 2405 Westwood Ave, Box 11083, Richmond, Va 23230.

INTERNATIONAL UROLOGY CONGRESS, Johannesburg, South Africa, Jul 25-30, 1976. c/o Festivals & Conventions Trust (Pty) Ltd, Box 61326, Marshalltown, 2107 Transvaal, Rep of South Africa.

INTERNATIONAL CONGRESS OF HYPNOSIS AND PSYCHOSOMATIC MEDICINE, Philadelphia, Jul 1-3, 1976. Dr. Martin T Orne, The Institute of Pennsylvania Hospital, 111 N 49th St, Philadelphia 19139.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, Colo, Jul 23-24, 1976. 1764 Gilpin St, Denver, Colo 80210.

■ TEXAS REHABILITATION ASSOCIATION, Dallas, Jul 11-14, 1976. Box 20040, Dallas 75220.

AUGUST

■ AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, Houston, Aug 1-6, 1976. 1725 K St, NW, Washington, DC 20006.

AMERICAN ASSOCIATION OF FOUNDATIONS FOR MEDICAL CARE, Boston, Aug 7-12, 1976. Box 230, Stockton, Calif 95201.

■ AMERICAN PODIATRY ASSOCIATION, Dallas, Aug 12-17, 1976. 20 Chevy Chase Circle, NW, Washington, DC 20015.

■ AMERICAN SOCIETY OF PARASITOLOGISTS, San Antonio, Aug 22-27, 1976. UT Health Science Center at Dallas, Dallas 75235.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 8-13, 1976. 1818 Gaylord St, Denver 80206.

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION, Tokyo, Aug 22-28, 1976. c/o Japan Medical Women's Association, 19 Kawadacho, Ichigayan, Shinjuku-ku Tokyo.

TRANSPLANTATION SOCIETY, New York, Aug 22-28, 1976. Felix T Rapaport, New York University Medical Center, 560 First Ave (Room H-438), New York 10016.

SEPTEMBER

AMERICAN ACADEMY FOR CEREBRAL PALSY, Los Angeles, Sep 12-16, 1976. 1255 New Hampshire Ave NW, Room 1030, Washington, DC 20036.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Boston, Sep 20-23, 1976. 1740 W 92nd St, Kansas City, Mo 64114.

■ AMERICAN ACADEMY OF MEDICAL ADMINISTRATORS, Dallas, Sep 19-20, 1976. 6 Beacon St, Boston 02108.

AMERICAN CANCER SOCIETY-NATIONAL CANCER INSTITUTE, St. Louis, Sep 20-22, 1976. Dr. Sidney L Arje, American Cancer Society, 777 Third Ave, New York 10017.

AMERICAN COUNCIL OF MEDICAL STAFFS, New Orleans, Sep 24, 1976. 3422 Bienville St, New Orleans 70119.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Dearborn, Mich, Sep 30-Oct 2, 1976. 4137 Erie St, Willoughby, Ohio 44094.

AMERICAN FRACTURE ASSOCIATION, Acapulco, Mexico, Sep 5-10, 1976. Box 10202, Atlanta 30319.

■ AMERICAN HOSPITAL ASSOCIATION, Dallas, Sep 20-23, 1976. 840 N Lake Shore Dr, Chicago 60611.

AMERICAN PSYCHIATRIC ASSOCIATION, Atlanta, Sep 19-23, 1976. 1700 18th St, NW, Washington, DC 20009.

AMERICAN ROENTGEN RAY SOCIETY, Washington, DC, Sep 18-25, 1976. 20 N Wacker Dr, Chicago 60606.

AMERICAN SOCIETY OF PLASTIC & RECONSTRUCTIVE SURGEONS, Boston, Sep 26-Oct 1, 1976. 29 E Madison St, Ste 807, Chicago 60602.

NATIONAL ASSOCIATION OF NEIGHBORHOOD HEALTH CENTERS, INC, Atlanta, Sep 20-24, 1976. 1625 I St, NW, Ste 403, Washington, DC 20006.

SOCIETY FOR PEDIATRIC RADIOLOGY, Washington, DC, Sep 19-20, 1976. c/o Johns Hopkins Hospital, Baltimore 21205.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Sep 17-19, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS PEDIATRIC SOCIETY, Dallas, Sep 23-25, 1976. Mary E Greene, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES, Houston, Sep 29-Oct 1, 1976. Drs. Sergio Henao and Mae F McMillan, 1300 Moursund Ave, Houston 77030.

OCTOBER

AMERICAN ACADEMY OF PEDIATRICS, Washington, DC, Oct 18-23, 1976. 5320 Pine Ridge Ave, Cheyenne, Wyo 82001.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct 31-Nov 5, 1976. 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tuscon, Ariz, Oct 3-6, 1976. Box 912, DTS, Omaha 68101.

AMERICAN BOARD OF FAMILY PRACTICE, Certification examination, Seven cities throughout the US, Oct 30-31, 1976. Dr. Nicholas J Pisacano, Exec Dir-Sec, University of Kentucky Medical Center, Lexington, Ky 40506.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Atlanta, Oct 24-28, 1976. 911 Busse Highway, Park Ridge, Ill 60068.

■ AMERICAN MEDICAL TENNIS ASSOCIATION, Austin, Lakeway World of Tennis, Oct 16-23, 1976. Box 13, Alton, Ill 62002.

AMERICAN MEDICAL WRITERS ASSOCIATION, Detroit, Oct 6-10, 1976. 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, New Orleans, Oct 7-10, 1976. Box 708, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, San Francisco, Oct 9-13, 1976. 515 Busse Hwy, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Los Angeles, Oct 15-22, 1976. 2100 W Harrison St, Chicago 60612.

■ AMERICAN SOCIETY FOR MICROBIOLOGY, Austin, Oct 6-8, 1976. 1913 I St, NW, Washington, DC 20006.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Washington, DC, Oct 11-13, 1976. 200 Berkeley St, Boston 02117.

■ ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, San Antonio, Oct 31-Nov 4, 1976. 10605 Concord St, Kensington, Md 20795.

GERONTOLOGICAL SOCIETY, New York, Oct 13-17, 1976. 1 Dupont Circle, Ste 520, Washington, DC 20036.

INTERNATIONAL ACADEMY OF PATHOLOGY, Washington, DC, Oct 17-23, 1976. c/o Dept of Pathology, University of Indiana Medical Center, Indianapolis 46202.

INTERNATIONAL CONGRESS OF ALLERGOLOGY, Buenos Aires, October, 1976. Dr. LL Henderson, Sec Gen, Mayo Clinic, Rochester, Minn 55901.

INTERNATIONAL FEDERATION OF GYNECOLOGY & OBSTETRICS, Mexico City, October, 1976. Av Baja California 317-301, Mexico 11 DF, Mexico.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 2, 1976. Box 3276, Amarillo 79106.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Dallas, Oct 17-19, 1976. Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

NOVEMBER

AMERICAN ACADEMY OF MAXILLOFACIAL PROSTHETICS, San Diego, Calif, Nov 8-10, 1976. 110 S Jerge Dr, Elma, NY 14059.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Newton, Mass, Nov 8-12, 1976. 430 N Michigan Ave, Chicago 60611.

■ AMERICAN SOCIETY OF CYTOLOGY, Houston, Nov 3-6, 1976. Dr. Warren R Lang, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 1006, Philadelphia 19107.

■ MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Houston, Nov 11-12, 1976. Stephen C Stuyck or Dr. Margaret Davis, MD Anderson Hospital and Tumor Institute, Houston 77030.

Starlite Village Hospital

Center Point, Texas

Ph.: 634-2212
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- - - A specialized hospital dedicated to the physical, mental and spiritual treatment of men and women suffering from alcoholic and similar disturbances.

F. E. Seale, M.D.
Medical Director

Bland Seale
Administrator

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Wichita Falls Clinic

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GENERAL SURGERY
W. E. Crump, M.D., F.A.C.S.
James T. Lee, M.D.
Clark W. Brazil, M.D.

GENERAL THORACIC AND VASCULAR SURGERY
Cecil H. Meares, M.D.

ORTHOPEDIC SURGERY
Jack E. Maxfield, M.D., F.A.C.S.
Clyde W. Parsons, M.D.
David G. Borman, M.D., F.A.C.S.
Richard H. Moore, M.D.

ORAL SURGERY
R. A. Mitchell, D.D.S.
Larry J. Cason, D.D.S.

RADIOLOGY AND RADIOACTIVE ISOTOPES
Thomas K. Bose, M.D.
David D. Salmon, M.D., D.A.B.R.

PEDIATRICS
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for the inflamed phase of hemorrhoidal flare-up

ANUSOL-HC® SUPPOSITORIES
Rectal Suppositories with Hydrocortisone Acetate

ANUSOL-HC® CREAM
Rectal Cream with Hydrocortisone Acetate

CAUTION: Federal law prohibits dispensing Anusol-HC Suppositories and Anusol-HC Cream without prescription.

Description: Each Anusol-HC Suppository contains hydrocortisone acetate, 10.0 mg; bismuth subgallate, 2.25%; bismuth resorcin compound, 1.75%; benzyl benzoate, 1.2%; Peruvian Balsam, 1.8%; zinc oxide, 11.0%; also contains the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated oil-cocoa butter base.

Each gram of Anusol-HC Cream contains hydrocortisone acetate, 5.0 mg; bismuth subgallate, 22.5 mg; bismuth resorcin compound, 17.5 mg; benzyl benzoate, 12.0 mg; Peruvian Balsam, 18.0 mg; zinc oxide, 110.0 mg; also contains the following inactive ingredients: propylene glycol, bismuth subiodide, propylparaben, methylparaben, polysorbate 60, sorbitan monostearate in a water-miscible base of mineral oil and glyceryl monostearate. Non-staining.

Indications: Anusol-HC is adjunctive therapy for the symptomatic relief of pain and discomfort in: external and internal hemorrhoids, proctitis, papillitis, cryptitis and fissures, incomplete fistulas, and relief of local pain following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. When acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment

Contraindications: History of sensitivity to any component. Topical corticosteroids should not be employed in tuberculous, fungal and most viral lesions of the skin (including herpes, vaccinia and varicella).

Warnings: The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy they should not be used unnecessarily on extended areas, in large amounts or for prolonged periods of time.

Precautions: Symptomatic relief should not delay definitive diagnoses or treatment. When there is bacterial skin infection, topical corticosteroids should be used only with appropriate concomitant antimicrobial therapy. Prolonged or excessive use of corticosteroids might produce systemic effects.

Dosage and Administration: Anusol-HC Suppositories: Remove foil wrapper and insert into the anus. One suppository in the morning and one at bedtime, for 3 to 6 days or until inflammation subsides. Then maintain patient comfort with regular Anusol.

Anusol-HC Cream: Adults—Remove tube cap and attach the plastic applicator. After gentle bathing and drying of the area, apply to the exterior surface and gently rub in. For internal use, insert the applicator by applying gentle, continuous pressure. Then squeeze tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days or until inflammation subsides. Then maintain patient comfort with regular Anusol.

Supplied: Anusol-HC Suppositories—boxes of 12 (N 0047-0089-12) suppositories in silver foil strips with (WC) printed in black.

Anusol-HC Cream—one-ounce tube (N 0047-0090-01) with plastic applicator; detachable label.

Full information is available on request.

Warner/Chilcott
(WC) Division,
Warner-Lambert Company,
Morris Plains,
New Jersey 07950

THE PROFESSIONAL SOURCE OF

COMFORT

FOR INTERNAL & EXTERNAL ANORECTAL CONDITIONS

Anusol-HC

suppositories and cream
with hydrocortisone acetate. Rx only

pain and burning
respond in minutes

• without belladonna alkaloids • without CNS stimulants

Artist's interpretation in bas-relief of external hemorrhoids, postoperative anorectal wounds and anal dermatitis.

Famous Fighters

NEOSPORIN® Ointment
(polymyxin B-bacitracin-neomycin)
is a famous fighter, too.

Provides overlapping, broad-spectrum antibacterial action to help combat infection caused by common susceptible pathogens (including staph and strep).

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

CONTINUING EDUCATION COURSES

JUNE

EDITOR'S NOTE: The American Medical Association's 125th Annual Convention, scheduled for Jun 26-30, 1976, in Dallas, will offer 57 postgraduate courses. Due to space limitations, TEXAS MEDICINE is able to list only a portion of these. More detailed information is available from the AMA, 535 N Dearborn St, Chicago 60610.

Allergy

Title: Immunotherapy of Allergic Disease
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Dates: Jun 28-29, 1976
Duration: 3 total course hours
Fee: $30
Designed For: General practitioners; Specialists in Allergy
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Anesthesiology

Title: Refresher Course for Recovery Room Nurses
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Nurses
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Basic Sciences: Microbiology & Immunology

Title: Workshop in Immunodiagnosis
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Jun 10-13, 1976
Duration: Continuous, 4 days, 7½ hours instruction per day, 30 total course hours
Fee: $150
Designed For: Specialists
Enrollment: Minimum, 20; Maximum, 50
Credit: 30 hours, AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee observes procedure, laboratory work, lecture, open question
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Cardiovascular Disease

Title: Texas Heart Institute Seventh Annual Symposium: Cardiovascular Diagnosis—1976
Sponsor: Texas Heart Institute, Houston
Location of Course: Texas Children's Hospital Auditorium, Houston
Dates: Jun 3-5, 1976
Duration: Continuous, 17 total course hours; Pre-symposium auscultation clinic (optional), continuous, 3 total course hours
Fee: $75; Auscultation clinic, $35
Designed For: General practitioners; Specialists
Enrollment: Maximum, 275
Credit: 17 hours, AAFP
Teaching Methods: Audiovisual materials, programmed instruction, lecture, open question, panel, seminar, television
Contact: Dr. Robert J Hall, Medical Director, Texas Heart Institute, Box 20269, Houston 77025

Title: Cardiology for the Internist
Sponsors: American College of Cardiology; Baylor College of Medicine; Memorial Medical Center of Corpus Christi
Location of Course: Red Carpet Inn, North Padre Island
Dates: Jun 21-24, 1976
Duration: Continuous, 4 days, 5 hours instruction per day, 20 total course hours
Fee: Members, $175; Nonmembers, $200
Designed For: General practitioners; Specialists
Enrollment: Maximum, 150
Credit: 20 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, seminar
Contact: Mary Anne McInerny, Director, Dept of Continuing Education Programs, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014

Title: Basic Electrocardiography
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 3 total course hours
Fee: $30
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Chest Disease

Title: Bronchogenic Carcinoma
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Specialists in Chest Disease
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Critical Care Medicine

Title: Basic Life Support—Cardiopulmonary Resuscitation
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Dates: Jun 26, 1976; Jun 28, 1976; Jun 30, 1976
Duration: 5 total course hours
Fee: $50
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, patient demonstration, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Dermatology

Title: Cutaneous Surgery for the Dermatologist
Sponsor: American Medical Association
Location of Course: UT Southwestern Medical School, Dallas
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Specialists in Dermatology
Enrollment: Maximum, 100
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Emergency Care

Title: Life-Threatening Injuries; Their Emergency Management
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners
Enrollment: Minimum, 50
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, patient demonstration, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Family Medicine

Cancelled: Laboratory Assistance in Medical Practice; UT Health Science Center at San Antonio; Jun 26-27, 1976

General Medicine

Title: Day-to-Day Problems with Diabetes
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Internal Medicine

Title: Total Care of the Burn Patient
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Specialists in Internal Medicine
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Medical Writing

Title: Writing for Scientific Journals
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Enrollee performs procedure, lecture, open question, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Neurology

Title: Bedside Clinics in Neurology
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Specialists in Neurology
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, patient demonstration, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Obstetrics & Gynecology

Title: Reproductive Endocrinology
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Dates: Jun 28-30, 1976
Duration: 5 total course hours
Fee: $50
Designed For: General practitioners; Specialists in Obstetrics & Gynecology
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Ophthalmology

Title: Ophthalmoscopy for Non-Ophthalmologists
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Orthopedic Surgery

Title: Primary Treatment of Injuries of the Hand
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: Specialists in Orthopedic Surgery, Plastic Surgery
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Pathology

Title: Diagnosis and Management of Common Renal Diseases
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: Specialists in Pathology
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Pediatrics

Title: Fluids and Electrolytes in Children
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Date: Jun 26, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners; Specialists in Pediatrics
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question, panel, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

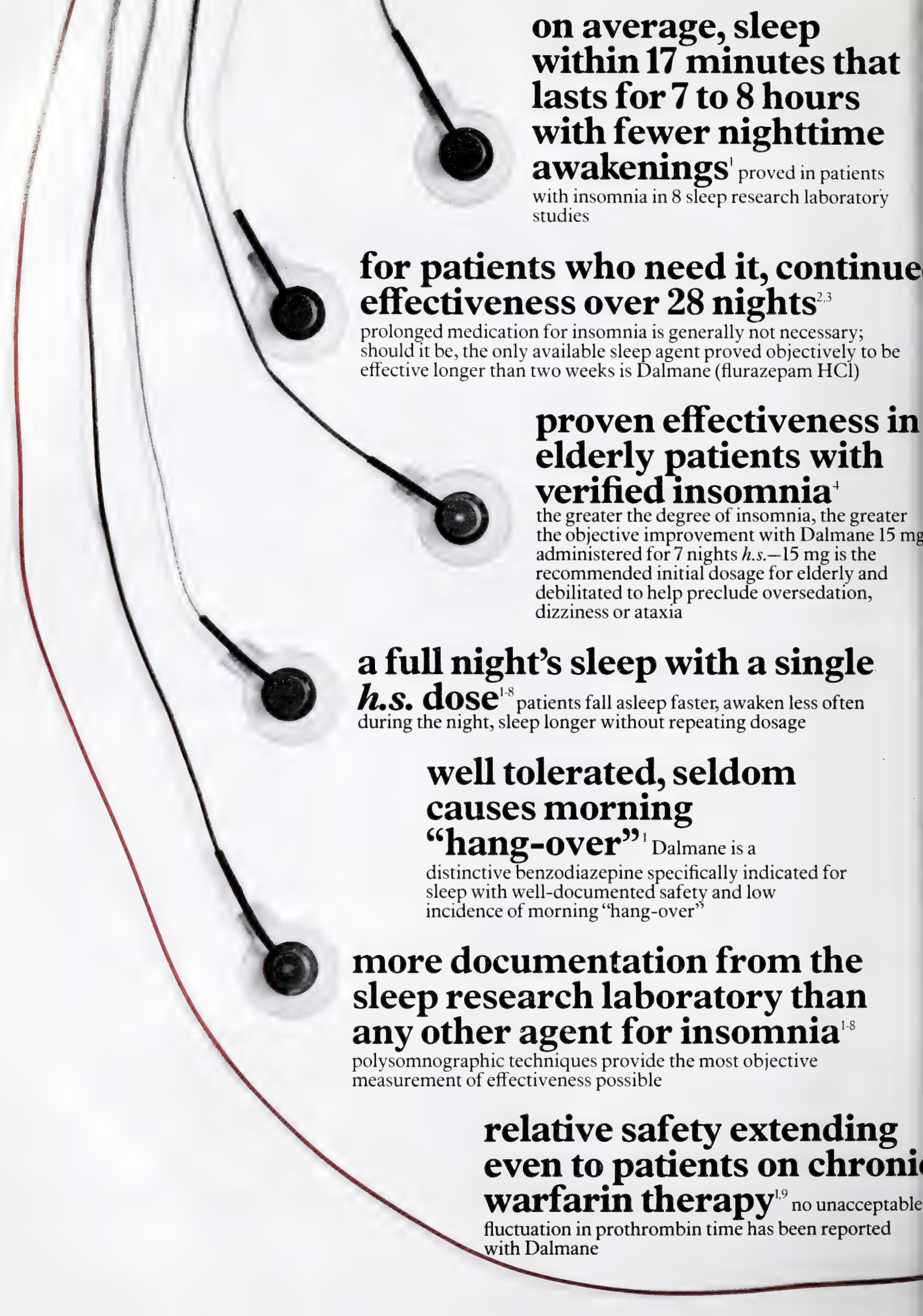
Physical Medicine & Rehabilitation

Title: Biofeedback in Medicine
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Dates: Jun 28-30, 1976
Duration: 6 total course hours
Fee: $50
Designed For: General practitioners; Specialists in Physical Medicine, Neurology
Credit: AAFP Elective; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, syllabus provided
Contact: Alice Harvey, Program Coordinator, 535 N Dearborn St, Chicago 60610

Plastic Surgery

Title: How to Sew
Sponsor: American Medical Association
Location of Course: Dallas Convention Center
Dates: Jun 26, 1976; Jun 27, 1976
Duration: 6 total course hours
Fee: $60
Designed For: General practitioners;

(Continued on page 35)



on average, sleep within 17 minutes that lasts for 7 to 8 hours with fewer nighttime awakenings[1] proved in patients with insomnia in 8 sleep research laboratory studies

for patients who need it, continue effectiveness over 28 nights[2,3]
prolonged medication for insomnia is generally not necessary; should it be, the only available sleep agent proved objectively to be effective longer than two weeks is Dalmane (flurazepam HCl)

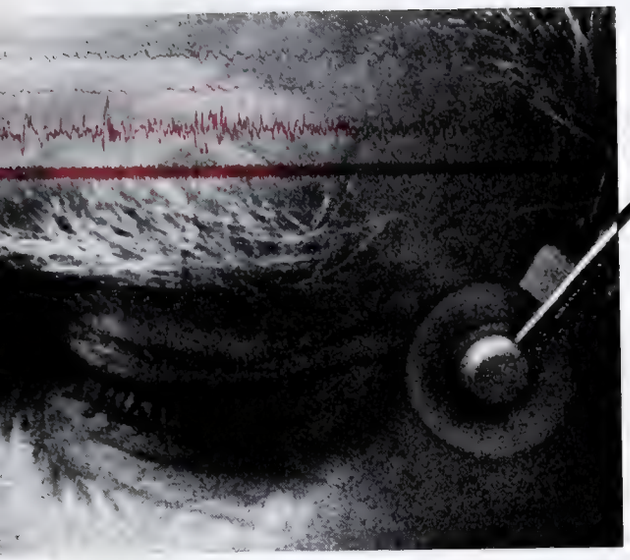
proven effectiveness in elderly patients with verified insomnia[4]
the greater the degree of insomnia, the greater the objective improvement with Dalmane 15 mg administered for 7 nights *h.s.*—15 mg is the recommended initial dosage for elderly and debilitated to help preclude oversedation, dizziness or ataxia

a full night's sleep with a single *h.s.* dose[1-8] patients fall asleep faster, awaken less often during the night, sleep longer without repeating dosage

well tolerated, seldom causes morning "hang-over"[1] Dalmane is a distinctive benzodiazepine specifically indicated for sleep with well-documented safety and low incidence of morning "hang-over"

more documentation from the sleep research laboratory than any other agent for insomnia[1-8]
polysomnographic techniques provide the most objective measurement of effectiveness possible

relative safety extending even to patients on chroni warfarin therapy[1,9] no unacceptable fluctuation in prothrombin time has been reported with Dalmane



The Dalmane® (flurazepam HCl) difference.

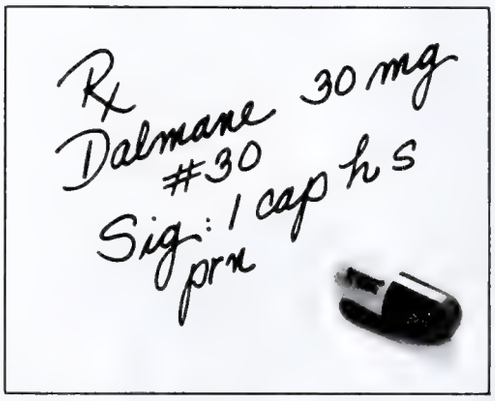
ROCHE

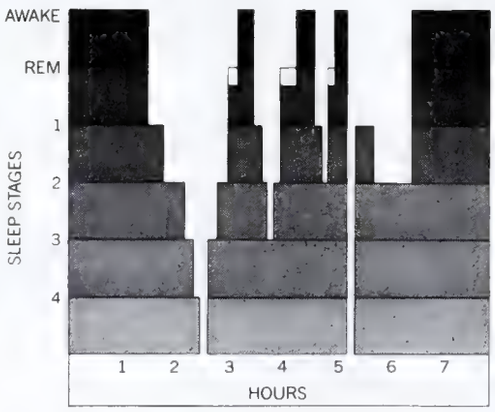
Please see following page for a summary of product information.

For relief of insomnia
no other sleep medication has all the advantages of
Dalmane®
(flurazepam HCl) C IV 30-mg and 15-mg capsules

Objectively proved in the sleep research laboratory:

- Sleep within 17 minutes, on average
- Sleep for 7 to 8 hours, on average
- Sleep with fewer nighttime awakenings
- Continued effectiveness over 28 nights of administration





Trouble Falling Asleep, Staying Asleep, Sleeping Long Enough

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

REFERENCES:

1. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
2. Kales A, *et al*: *Clin Pharmacol Ther 18*:356-363, Sep 1975
3. Dement WC, *et al*: Long-term effectiveness of flurazepam 30 mg *h.s.* on chronic insomniacs. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, Jun 30-Jul 4, 1975
4. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
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Hemodialysis of children: a review

Michael Berger, MD; Luther B. Travis, MD; Hugo F. Carajal, MD;
Ben H. Brouhard, MD; Robert J. Cunningham, III, MD

There are currently approximately 50 children in Texas with end-stage renal disease, and each year an additional child per million total population within the state can be expected to develop this problem.

Since kidneys are not always readily available for transplantation, life must be maintained by dialysis. However, many adult dialysis centers are not equipped for or willing to undertake the hemodialysis of small children. In the past, many of these children died unless their parents were able to master the technique of peritoneal dialysis.

Texas now has a facility specifically designed for the hemodialysis of small children. The techniques and problems associated with this procedure are described. Since 1960 The University of Texas Medical Branch has been one of a small number of centers with a Division of Pediatric Nephrology specializing in the comprehensive care of children with kidney disease. A large aspect of this program has been devoted to the treatment of children with chronic renal failure, either through conservative medical management, peritoneal dialysis, or renal transplantation. Recently, with the opening of a Pediatric Dialysis and Transplantation Unit, hemodialysis has increased this ability even further.

Important developments leading to the opening of this treatment facility included: the development and publication of successful techniques from other centers with experience in the hemodialysis of children;[1,2] the development of dialysis equipment and principles specifically designed for children;[3] the need for another alternative (to peritoneal dialysis) for those children who could not receive transplants, or who rejected their transplanted kidney; and the financial commitment on both a state and federal level to support such treatment.

Most children dialyzed in this country are cared for in units primarily designed for adults. We, and others,[4] feel that this is an undesirable situation for both physiological and psychological reasons. In addition, the adult-oriented specialist often is not attuned to the complexities of working with both the child and his or her parents. Consequently, it was our feeling that a pediatric program should be just that—one designed for the total care of the child. Fortunately, the nephrologists operating the very successful adult dialysis unit at our institution vigorously supported our efforts to develop an independent facility.

Our children's dialysis unit is staffed by nurses trained in pediatrics who have elected to subspecialize in renal nursing. The unit is under the direction of three full-time pediatric nephrologists, and has the additional permanent staff of a child psychologist and a pediatric social worker. Age-level school teachers and an occupational therapist round out the health care team.

As in peritoneal dialysis, hemodialysis depends upon the diffusion of small molecular weight solutes, such as urea, creatinine, potassium, etc, from the patient's blood to dialysate across a semipermeable membrane, the rate of diffusion being dependent upon the concentration gradient between the blood and dialysate.[5] In this manner, metabolic wastes that accumulate in the child's blood because of his nonfunctioning kidneys, and which may contribute to uremic symptomatology, are removed. Excess fluid is removed from the

From the Pediatric Dialysis and Transplantation Unit, Division of Pediatric Nephrology, The University of Texas Medical Branch, Galveston.

patient by the creation of a pressure gradient or an osmotic gradient, or both, between the blood and dialysate compartments.

Whereas in peritoneal dialysis the peritoneum serves as the dialysis membrane, special cellophane membranes are utilized in hemodialysis. Basically, all dialyzers have a configuration similar to the parallel flow dialyzer, schematically represented in Fig 1, in which the cellophane membranes are sandwiched between two rigid or semirigid plates.[6] In the coil dialyzer, they are wrapped concentrically about a supportive core.[7] In the capillary type dialyzer[8] they consist of hollow cellulose fibers enclosed in a plastic casing.

Materials, Methods and Complications

Dialyzer Selection

The selection of a dialyzer appropriate for a child is dependent upon certain principles advocated by Kjellstrand and his associates. Ideally, the dialyzer and its associated blood lines should contain no more than 10% of the patient's blood volume at any one time, and should be of moderate efficiency to prevent too rapid a drop in the level of blood urea nitrogen (BUN). These same authors have put forth guidelines for determining the proper length of dialysis to accomplish adequate biochemical control of uremia.[3]

The dialysate, the solution against which the blood flows (see Fig 1), is designed to approximate normal extracellular fluid but is altered so that the biochemical abnormalities of uremia may be corrected. The availability of a large number of dialysate solutions, coupled with the fact that each child may have distinctive biochemical abnormalities, has led us to favor the use of individual dialysate delivery systems, allowing attention to be focused on each child's biochemical problems without having to compromise treatment of any other patient.

Access to Circulation

Access to the circulation may be gained through an external arteriovenous (A-V) shunt or an internal A-V fistula.[9] An A-V shunt consists of a Teflon cannula surgically implanted into an artery and adjacent vein and attached by a Silastic connector. Prior to each dialysis this connector is removed; the arterial and venous ends are then attached to blood lines leading to and away from the dialyzer, respectively. Radial, posterior tibial, femoral, and brachial vessels are comonly utilized in children to create A-V shunts.[10]

In 1966 the A-V fistula was described by Brescia and others.[11] This method entails surgically anastomosing an artery to a vein, which subsequently dilates. After sufficient maturation, the enlarged blood vessel will accommodate large-bore needles to initiate dialysis. The A-V fistula has eliminated many of the disadvantages associated with use of the A-V shunt.[12] Clotting and infection occur less often. Freedom of arm movement is present; unsightly bandages do not exist. Initiation of dialysis, however, may be a painful procedure and this has limited its use in some pediatric centers, although others[13] report greater acceptance. Other methods of gaining circulatory access, through the use of bovine grafts and saphenous vein autografts and homografts,[10] are being utilized more frequently as experience with fistulas increases.

Complications

The complications of regular dialysis treatment are numerous and have been

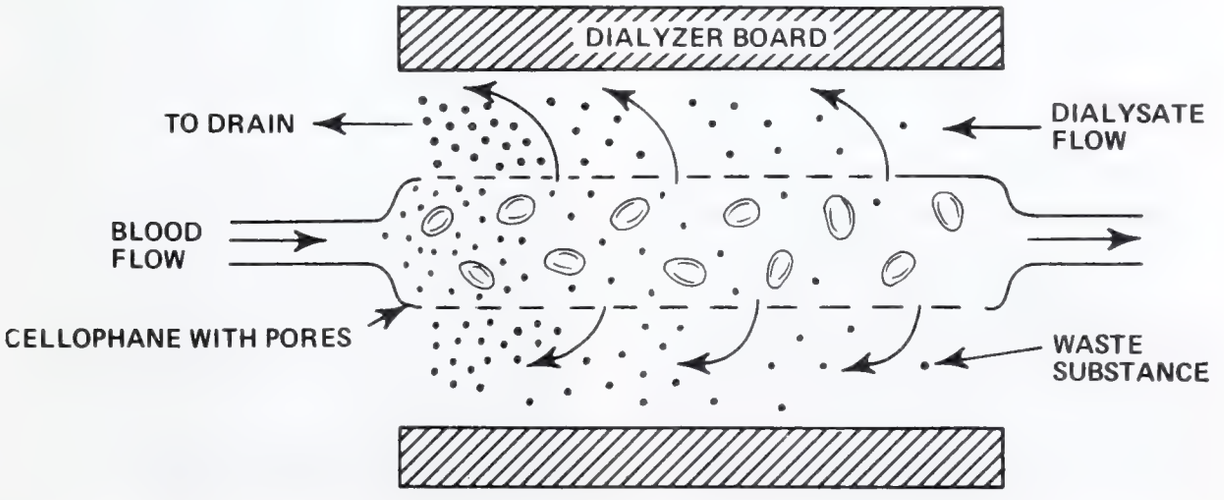
well reviewed.[14] They may be related to the dialysis procedure itself, uremia, or both.

The primary problems related to the dialysis procedure itself include the dialysis disequilibrium syndrome and hypotension secondary to excessive ultrafiltration. Dialysis disequilibrium has been attributed to several factors[14,15] but is, at least in part, caused by derangements that occur when solutes are removed more rapidly from the extracellular space as compared to the intracellular space. This results in an osmotic gradient favoring the flow of fluid intracellularly. In the central nervous system, this results in cerebral edema with symptoms ranging from headache to convulsions. While dialysis disequilibrium is usually a problem when a patient is first dialyzed, it may occur at any time the child's BUN level, and consequently, his plasma osmolality, are elevated, a situation frequently seen following dietary indiscretion, such as that precipitated by birthday parties and holiday dinners.

Means of preventing dialysis disequilibrium include the deliberate performance of an inefficient dialysis[14,16] and the maintenance of an elevated plasma osmolality[3] as urea and other uremic toxins are removed. To date the major manifestation of dialysis disequilibrium, specifically convulsions, has been avoided at The University of Texas Medical Branch by deliberately performing short, inefficient dialyses repetitively over a period of several days so that rapid drops in BUN levels do not occur, and by administering anticonvulsants prophylactically. Once the patient has been brought into good biochemical balance, a regular schedule of dialysis therapy is initiated.

Excessive ultrafiltration (the too rapid removal of excess fluid from the patient) may lead to severe hypotensive episodes, muscle cramps, and the like.[2,14] Accurate

1. This drawing illustrates the mechanics of the parallel flow dialyzer. Dialysate flows between the supporting plates and cellophane membranes; blood flows between the two layers of cellophane. Metabolic wastes diffuse from the blood compartment to the dialysate compartment because of their high concentration in the blood and absence in the dialysate. The dialysate is then discarded.



assessment of the patient's true dry weight by the performance of body composition studies when the child first enters the hemodialysis program, and at six-month intervals thereafter; recording of weight prior to, during, and after each dialysis; knowledge of the fluid-removal characteristics of the dialyzer being used; and elimination of antihypertensive agents prior to dialysis have helped avoid these problems. In patients confined to bed because of surgery, bed scales may be utilized to accurately assess weight loss during dialysis.

The problems of arteriovenous shunts include the risk of infection, clotting, hemorrhage, heart failure,[11] limitation of activity, and the potential for erosion of the wings of the shunt through the patient's skin. The main problems associated with the use of arteriovenous fistulas in children are the painful venipuncture and the anxiety that it engenders.

The hematologic problem of hemodialysis is multifaceted. Patients on dialysis are anemic because of frequent blood tests and blood loss to the dialyzer;[17] hemolysis, toxic bone marrow depression, and lack of erythropoietin;[18] and, possibly, iron and folate deficiencies,[19] Because these children usually tolerate their anemia extremely well, blood transfusion should be withheld until symptoms appear or until the hematocrit falls below 12%. We prefer to give iron intravenously[20] rather than to give transfusions. The use of androgens in children—to boost their hematocrit values—should be condemned because of its growth-retarding effect.

Certainly, as the number of units of blood transfused increases, the risk of hepatitis B infection increases for the patient and staff.[21] Some pediatric units have reported a high incidence of hepatitis,[22] and modes of transmission of hepatitis virus other than transfusion have been reported.[23] Consequently, the nurses in The Pediatric Dialysis and Transplantation Unit follow meticulous hepatitis precautions, and the unit has two isolation rooms so that the patient and his equipment can be isolated if hepatitis develops.

Fluid overload and hypertension between dialyses and hypotension during dialysis may complicate the hemodialysis of pediatric patients. Control of salt and water intake usually is a greater problem in children than in adults because (1) salt intake is proportional to caloric intake and is, therefore, greater on a per kilogram basis in children;[1] (2) much of the child's blood volume may, in essence, be removed in order to fill the dialyzer—lowering his blood pressure and limiting the use of ultrafiltration;[1] and (3) children may be less compliant than adults in following dietary restrictions. The role of antihypertensives in the dialysis of children presents certain problems which need not concern the general practitioner or pediatrician. It should be realized, however, that although they may serve a useful purpose, they can actually complicate the dialysis procedure and consequently cannot be used indiscriminately.

Bone disease is a common complication of uremia, and is due to the derangements that occur in calcium, phosphorus, vitamin D, and parathormone interrelationships.[24] Medical management includes the use of phosphate binders, calcium supplementation, vitamin D, and correction of acidosis. Although renal osteodystrophy frequently develops or worsens in patients on maintenance hemodialysis, it is difficult to predict in whom this will occur. Use of low-calcium dialysate[25] or fluoridated water,[26] however, will hasten its occurrence. The various forms of bone dis-

ease include osteitis fibrosa cystica, osteomalacia, and osteosclerosis.

The use of the aforementioned medications; frequent monitoring of serum calcium, phosphorus, magnesium, alkaline phosphatase, and parathormone levels; periodic radiologic evaluation of the patient; the use of deionized water to mix dialysate; and the use of dialysate containing 6 mg/100 ml calcium may forestall bone disease.

The psychosocial stresses of chronic renal failure and its treatment are similar to those of any chronic illness,[27] with the additional stresses specific to dialysis therapy.[2,28,29] The approach to this problem at The University of Texas Medical Branch has been outlined previously.[30]

Discussion

Most pediatric nephrologists feel that the ultimate aim of treatment of chronic renal failure in children is successful renal transplantation,[1] as, in many respects, dialysis is more successful in curing uremic symptomatology than the patient.[31] Therefore, all children accepted into a dialysis program should be candidates for renal transplantation and should be so treated when a suitable kidney becomes available.

Chronic dialysis, whether hemodialysis or peritoneal dialysis, is indicated whenever medical management no longer controls uremic symptomatology—when uremia interferes with play, school attendance, and the like. In some children this may be when the serum creatinine reaches 10 mg/100 ml; in others, 15 mg/100 ml. Because of dietary protein restriction, the absolute value of BUN cannot be used to accurately evaluate renal function.[32] Under no circumstances should dialysis be delayed until uremic pericarditis, peripheral neuropathy, or severe malnutrition develop.

This review outlines the philosophy and technique employed by the only facility in Texas for the hemodialysis of young children. While older, larger adolescents may be suitably dialyzed in adult units from a technical point of view, the crippling effects of chronic renal disease upon the psychosocial development of some of these individuals may make their treatment in a pediatric facility preferable.

While there is no doubt that as a form of treatment, hemodialysis has several drawbacks, it can maintain a high-quality existence in a child who until recently might have had no alternative but death unless a kidney suitable for transplantation were readily available.

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The authors, Department of Pediatrics, Division of Nephrology, The University of Texas Medical Branch, Galveston, TX 77550

Spermatic cord torsion in the newborn

Terry A. Treadwell, MD; Richard J. Andrassy, MD; Irving A. Ratner, MD, FACS

Torsion of the spermatic cord is most commonly noted in adolescence and early adulthood; however, it does occur at all ages including the neonatal period. Diagnosis of torsion of the spermatic cord in the newborn is difficult because the condition is rare and the symptoms are few. Nevertheless, the condition must be recognized promptly and surgical correction of the torsion must be undertaken immediately because delay will result in the testis losing part or all of its spermatogenic and hormonal functions.

Since the first report of a case of torsion of the spermatic cord in a neonate (a 4-hour-old infant) by Taylor[1] in 1897, only 70 additional cases have been recorded in the literature;[2-5] approximately half of these were recognized within the first 24 hours of life. We are reporting two more cases; they were among 49 cases of torsion of the spermatic cord in males 20 years of age or younger at Santa Rosa Children's Hospital between 1967 and 1974. Thirteen (26%) of these 49 patients were under 5 years of age, and 4 (8%) were less than 2 years old (Fig 1). Eleven (22%) of the 49 patients had an inguinal hernia associated with the spermatic cord torsion. Of the 13 patients under 5 years of age, 7 (54%) had an associated inguinal hernia.

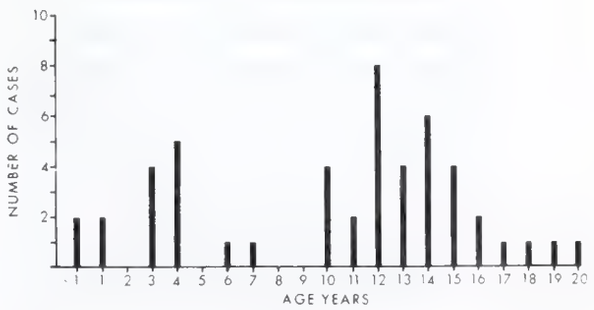
Report of Cases

Case 1: A full-term white male infant, the product of a normal pregnancy and uncomplicated delivery, was seen at age 2 days. A mass had been noted in the right side of his scrotum immediately after birth. There was no fever, abdominal distention, vomiting, diarrhea, or rectal bleeding. Physical findings were normal except for a hard, slightly tender, freely movable mass in the right side of the scrotum that was thought to involve the right testicle. The mass was opaque to transillumination. The skin of the right side of the scrotum was red and puckered. The left testicle was normal except for a small hydrocele. No inguinal hernias were noted. Laboratory results were within normal limits.

A right scrotal exploration, performed through an inguinal incision, revealed torsion of the spermatic cord outside the tunica vaginalis, and a small indirect inguinal hernia sac. The testis was dark blue, but the color improved somewhat after the torsion was reduced. All structures of the testis and spermatic cord appeared to be normal. The testis was replaced in the scrotum, and the indirect inguinal hernia was repaired by the Ferguson technique. The patient did will postoperatively and was dismissed. One month later, a left hydrocelectomy and orchiopexy were performed.

Case 2: This patient, a full-term white male infant, was referred to Santa Rosa Children's Hospital for evaluation of possible spermatic cord torsion at age 14 days. The pregnancy had been normal, and the delivery uncomplicated. At age 9 days, a lump suddenly developed in the

1. Age distribution of patients 20 years old or younger with torsion of the spermatic cord seen at Santa Rosa Children's Hospital, 1967 through 1974.



right side of the patient's scrotum, and he vomited once. He was seen by a physician who noted that the mass was translucent to transillumination and made the diagnosis of a hydrocele. During the three-day hospitalization for observation, the mass decreased in size but did not resolve.

On admission to Santa Rosa Children's Hospital, the child had no fever, abdominal pain or distention, vomiting, diarrhea, or rectal bleeding. Results of physical examination were normal except for a tense, enlarged, right testicle. The spermatic cord was thickened, and a right inguinal hernia was noted. The scrotal mass now was opaque to transillumination. The left testicle was normal to palpation. A small left inguinal hernia was present. Laboratory data were within normal limits.

A right scrotal exploration was carried out through an inguinal incision. Torsion of the spermatic cord, outside of the tunica vaginalis, a small indirect inguinal hernia sac, and a hydrocele were found. The testis was black. After reduction of the torsion and hydrocelectomy, the testis was returned to its position in the scrotum. The inguinal hernia was repaired by the Ferguson technique. After these procedures, a left inguinal herniorrhaphy and orchiopexy were performed.

Discussion

Diagnosis

In any patient, early diagnosis is necessary to prevent loss of part or all of the involved testis. In older children and adults, torsion of the spermatic cord is manifested by the sudden onset of pain in the involved testis, with possible radiation to the groin, lower abdomen, or lumbar region. Nausea and vomiting may be present. The testis is swollen, tender, and drawn upward toward the external ring of the inguinal canal. The pain is made worse by elevation of the testis (Prehn's sign). The epididymis may be in an abnormal or anterior or lateral position.

The situation is entirely different in the newborn. Symptoms usually are absent. In a series of 37 cases of torsion of the spermatic cord described by Snyder and coworkers,[6] the youngest child to complain of pain was 2½ years old. In this series, 50% of the patients under 2 years of age who had testicular torsion had a temperature greater than 38.3 C (101 F), but this seems to be the exception rather than the rule. One of our patients had vomited at the time the scrotal mass was noted, but vomiting was seen in only 3 of the 18 patients under 2 years of age in Snyder and coworkers' series.

The condition usually is discovered on examination of the newborn. Classically, there is a red-to-purple, hard, nontender mass in the scrotum that is opaque to transillumination. Only one case has been reported[7] in which spermatic cord torsion in a newborn infant presented as a hydrocele and was translucent to transillumination. Our second case presented in this manner and, at operation, was found to be associated with a hydrocele.

The diagnosis must be made as soon as possible so that surgical treatment can be started immediately. Prompt reduction of the torsion is of great importance to avoid permanent damage to the testis. The delay between onset and operation ranged from two days to six weeks in one large series,[8] and from four hours to seven months in another series.[9] The results of surgical treatment depend on the length of the delay. If the torsion can be reduced within

six hours, viability of the testis is probable.[6,10]

In animals, Smith[10] found that, after complete occlusion of the spermatic cord, slight damage to the spermatogenic cells occurred after two hours, severe damage occurred after four hours, and complete loss occurred after six hours. He also noted that, under the same conditions, the Leydig cells were severely damaged after eight hours and were completely lost after ten hours. These findings cannot be strictly applied to humans because of the different degrees of obstruction that can occur in torsion of the testis.

In an attempt to evaluate this situation in humans, King and associates[11] evaluated the amount of testicular tissue remaining one year after surgical reduction of testicular torsion as a function of the length of time from the onset of symptoms until surgical reduction. They noted that the damage in the human testis is generalized and not greater in the spermatogenic portions. The study indicated that, if the torsion was reduced within eight hours of the onset of symptoms, 100% of the patients had a normal residual testicular mass at the end of one year. However, the remaining mass was 85% of normal if the delay was 8 to 24 hours, 60% of normal if the delay was 24 to 48 hours, and 25% of normal if the delay was 48 to 72 hours. When the reduction was done 72 hours or more after the onset of symptoms, all patients had 20% or less of the original testicular mass one year postoperatively.

Differential Diagnosis

The differential diagnoses include acute epididymitis, strangulated inguinal hernia, torsion of the appendix testis, trauma with hemorrhage into the testicle, acute inguinal adenitis, scrotal abscess, orchitis, and testicular tumors. In the newborn, however, the list of choices may be modified. Epididymitis, strangulated inguinal hernia, torsion of the appendix testis, orchitis, inguinal adenitis, and scrotal abscess are rarely seen. Hemorrhagic infarction of the testis and malignancy are seen in the neonatal period, but are infrequent. Therefore, a red, firm, nontender mass in the scrotum that is opaque to transillumination should be considered to represent torsion of the spermatic cord until proved otherwise.

Treatment

Kaplan and King[12] have emphasized that the treatment for torsion of the spermatic cord is surgical reduction as soon as the diagnosis is suspected. Rhyne and coworkers[13] stated that spontaneous correction is rare. Manipulative reduction of the torsion was advocated by Burkitt,[14] but Snyder and associates[6] consider this to be unwise because of the high incidence of recurrence, the disability associated with this form of treatment, and the poor long-term results in regard to testicular survival. Therefore, surgical exploration and reduction are mandatory.

An inguinal approach is indicated for the surgical exploration, with the testis being delivered out of the scrotum into the wound for examination and detorsion. This approach allows the entire spermatic cord and testis to be examined and permits repair of an inguinal hernia if present. Both of our patients had associated small, indirect, inguinal hernia sacs. In Snyder and associates' series,[6] 11% of patients had an accompanying inguinal hernia and 5% had a hydrocele of the

cord. In our series, 7 (54%) of the 13 patients under 5 years of age had an associated inguinal hernia.

There is controversy over what to do after the torsion has been reduced. Historically,[15] orchiectomy was the procedure of choice for the black, apparently gangrenous, testis. However, many agree with the more recent statement by Reeves and coworkers[2] that "The gross appearance of the involved testicle should not influence one's decision to leave it in place." It has been suggested[2,4,6,8] that orchiectomy be done only if there is evidence of systemic toxicity. Instead, the testis should be replaced in the scrotum in the hope that some testicular function may be salvaged. Reeves and associates[2] reported that, even when a grossly necrotic testis was left in place, no complications were observed.

The need for routine exploration of the opposite side and orchiopexy is a debated question. Torsion of the spermatic cord occurs with equal frequency on the right and left sides, although Campbell's[15] early report indicated a higher incidence on the right side. Papadatos and Moutsouris[9] reported that bilateral torsion of the spermatic cord occurs in about 5% of cases. The structural abnormality predisposing to torsion of the spermatic cord is bilateral in 50% of cases.

Although the cause of this torsion is not known with certainty, there is agreement[6,15] that abnormal attachments of the tunica vaginalis to the spermatic cord and testis play a role. Physical activity and trauma are sometimes mentioned as causes, but these cannot be substantiated as major causes. In fact, torsion of the spermatic cord can occur during sleep, and Fitzpatrick and Orr[3] and Lusignan and coworkers[5] have shown conclusively that it occurs in utero. Torsion can occur at two locations on the spermatic cord: in older children and adults the twisting usually occurs within the tunica vaginalis, whereas in newborns it occurs outside the tunica vaginalis.

The adult form of torsion is related to conditions that result in excessive mobility of the testis, and is usually referred to as the "bell-clapper" type.[6,15,16] These conditions are not present in the newborn infant with torsion of the spermatic cord outside the tunica vaginalis. Longino and Martin[8] reported no scrotal or testicular abnormality in any of their nine newborns with spermatic cord torsion. However, Campbell[15] pointed out that Sir Ashley Cooper, more than 140 years ago, observed that the entire testis and its investing structures could be completely withdrawn from the scrotum of the infant without tearing any tissue, because of the immaturity of the attachments of the scrotal contents to the skin of the scrotum. This, in effect, would give the testis increased or "abnormal" mobility.

The common connection between the two forms of torsion seem to be related to the cremaster muscle. Smith[17] noted that the cremaster muscle inserts obliquely on the spermatic cord, and contraction of this muscle causes the testis to rotate (counterclockwise for the left testis and clockwise for the right, as viewed from the patient's feet). A sudden spasm of the cremaster muscle could cause the excessively mobile testis to twist completely on the spermatic cord for one, two, or more turns. This would result in counterclockwise torsion on the left and clockwise torsion on the right. This was true in our first case; it was not mentioned specifically in our second case or in other reports.

The 50% incidence of bilateral anoma-

lies and the 5% incidence of bilateral torsion in older children and adults indicate the need for contralateral exploration and orchiopexy in these patients. In the newborn, however, the condition is not associated with testicular anomalies, so the need for contralateral orchiopexy has been questioned.

Reeves and coworkers[2] reported no complications in nine newborns who had torsion of the spermatic cord but did not have a contralateral orchiopexy. However, because bilateral torsion in the newborn has been reported,[9,16] contralateral prophylactic orchiopexy is indicated. This was done for both of our patients.

Summary

Torsion of the spermatic cord in the newborn, an uncommon condition, must be diagnosed early to permit immediate surgical treatment. Diagnosis in the newborn is difficult because of the paucity of symptoms. A hard, red-to-purple, nontender mass in the scrotum that is opaque to transillumination should be considered to represent torsion of the spermatic cord until proved otherwise. The appropriate treatment is immediate surgical exploration through an inguinal incision. The torsion should be reduced and the testis returned to its location in the scrotum. Contralateral orchiopexy is indicated.

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Dr. Treadwell, Scott and White Memorial Hospital, Scott Sherwood and Brindley Foundation, Temple, TX 76501.

Dr. Andrassy, Wilford Hall Medical Center, San Antonio, TX 78200.

Dr. Ratner, Santa Rosa Children's Hospital, San Antonio, TX 78200.

Reprint requests to Dr. Treadwell.

Closet television

J. George Bakula, BA

To those of us who work without liberal state or federal financing, medical television can be a depressing field. At conferences we hear about the million-dollar production centers at university campuses, about multifaceted conventional microwave or satellite networks, or about many-thousand-dollar budgets for buying and renting programs, films, and videotapes. Yet, in our own world, our institution's "television facility" might consist of a videocassette player and a television set, housed in a made-over closet. This article is for those who must operate on less than generous budgets; it tells what we have learned about getting the most out of the limited funds that are available for television in most institutions.

Our entire operating budget at Scott and White Clinic for the past fiscal year was $8,000, excluding salaries. Granted, we are luckier than most. We already had production capabilities that included one color camera, a color film chain, several videocassette machines, and tie-ins with the institution's own television distribution system to patient's rooms. However, that $8,000 covered maintenance, office supplies, printing, film and tape rentals, travel expenses, and a vague category entitled "television supplies," which included everything from videotape to screwdrivers, from studio lights to lumber for storage shelving. Some probably think that such a budget is outrageously high, while others snicker about how small it is.

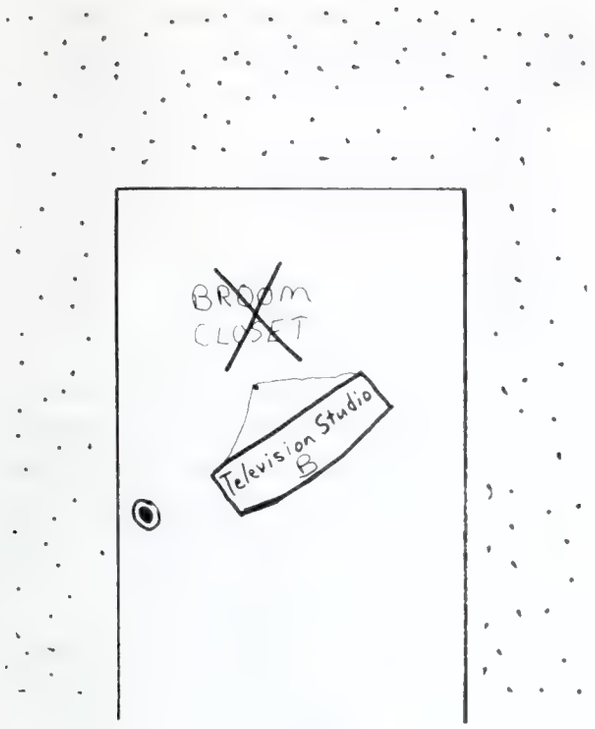
We finished our fiscal year $2,000 in the black, while adding nearly 100 hours of recorded programs to our library and transmitting more than 200 hours of live programming over our cable system. The word "we" refers to a staff consisting of myself and one full-time camera operator/electronics technician. If we do need another person to assist in a recording session, we usually can get help from our institution's photography department.

We are housed in a room 4 by 12 meters (12 x 40 ft), that was originally intended to be used as a storage closet. This room contains our studio, maintenance shop, videotape storage, production equipment (recorders, switcher, etc), and distribution equipment. Our self-contained color camera has been in operating rooms, patients' rooms, classrooms, offices, the auditorium, treatment rooms, and, of course, the studio.

But let us start from scratch. What are some methods for developing a television system?

Getting Equipment

The first step is to convince yourself that television makes an important contribution to education; the next is to convince the governing body of your institution. Perhaps you can recruit help for this selling effort from within the institution—for example, physicians who used televised programs in their medical school training, or nurses who know of good teaching material on videotape. If your institution is involved in local nursing, paramedical, or postgraduate medical education, you may already have a foot in the right door. Funds may be available from some of the educational support organizations which will help you establish a minimal television facility. The Area Health Education Center and the Office of Educational Opportunity helped us in our initial purchase of a videocassette recorder and television set. The local Veterans Administration hospital let us borrow some of their equipment (a camera and a reel-to-reel videotape recorder) to record programs as well as to transmit programs to them.



Suppose your administration turns down any equipment purchase request and you cannot find an organization that will help provide funds. Look around. You might be able to work out a facility-sharing plan with a local academic institution. Many junior colleges, and many local school districts, have some television equipment that they might be willing to share with you. Do not rule out the local high school football coach with the portable black-and-white outfit—a lot can be done with such equipment. If there is a large manufacturing company in your town, you might check with them. It just takes a little imagination. All it may involve is some trading, such as arranging for an interested physician to be available to the coach/biology teacher/administrator as a speaker on some appropriate medical subject in exchange for use of equipment.

Program Material

Once you own or have the use of some video equipment, what can you do with it? Let us assume that you have at least a videocassette player and a television set, and that you gave some thought to use of the equipment before you went through all the effort of getting it. What you need now is software—the programs to play on it.

Your professional medical staff may already have some sources for material that they want to use. If you have little capital to spend on programs, there are several sources that offer free programs or that will dub their programs onto blank videotapes supplied by you. Two of these sources are the Academy of Health Sciences (US Army, Fort Sam Houston, Tex) and the National Medical Audiovisual Center (Atlanta, Ga). Unfortunately, both are cutting back on their video services.

Medical educational television programs can be borrowed from pharmaceutical companies. Many of their programs are well done; however, they are usually designed to sell a specific product and most include a sales pitch. Other free or relatively inexpensive materials can be obtained from some of the professional medical organizations. You may have to rent the programs, but most of the organizations try to keep this cost minimal. Finally, the physicians at your institution might ask their alma maters about using some of the instructional programs produced at the schools.

If your administration has given you funds to buy or rent programs, you will have fewer problems. In addition to the resources already mentioned, there are many medical "networks" cropping up around the nation. These networks usually charge an annual fee and may charge an additional fee for renting individual programs. Others send out programs on a rotating basis for you to use at your discretion. Finally, many nursing schools offer their videotapes for rent or purchase, and your nursing staff might take advantage of these programs.

For patient education, free materials are surprisingly easy to obtain. Most of the national organizations, such as the American Lung Association, the American Heart Association, and the National Safety Council, have public service materials and will lend them to medical people. In fact, physicians at your institution may be working with some of these groups in your community. The American Lung Association has been most cooperative about letting us record some of their programs on videocassettes for use in patient education. Most of the films from these different societies

are professionally done and contain information most patients can understand and use. Also, many are offered in Spanish, and we have found these versions to be extremely useful in central Texas. Some of the pharmaceutical companies also offer free programs that can be used for patient education; however, few of the companies are willing to let you record their programs.

Patient education is different from professional staff education. If you are planning to present your programs in the patients' waiting area, remember that you are dealing with great variations in interest and educational background. Also, you may find that the waiting room is not the place to set up your playback unit because of noise and crowded conditions; it may be more efficient to use a small room where you can offer selected materials for specific patients to see and read before or after their treatment ("closet television").

The Format

When you have a program in your hands, how do you get it into a format you can use? You may have to go scrounging again. If you have a local television station or cable television company, you might contact them. But remember that they are in the business of selling time, and you may have to pay to get your film or slide/audio tape program dubbed onto your videotape. You will have to supply the blank videotape and, depending on the machine format you are using, you will probably have to supply the recorder as well. If you have a local public broadcasting service (PBS) channel, you might ask them for assistance. Many of them are interested in helping with community information and communication projects.

The least desirable way to dub movie film is to project it onto a screen, aim the television camera at it, and record away. However, if this is the only way you can get the job done, do it. The quality of your end product will definitely suffer, but the program will be usable and that is the main thing.

Using the television camera for shooting slides projected on a screen is nowhere near the problem that it is with movies, and some of the results are fairly good. If the slides are in a vertical format this is the only way to record the information for television. Also, you might want to record lantern slides or other nonstandard slides on videotape. You may be able to borrow a slide projector and a tape deck (for the audio portion of the program). Remember that the resolution (readability) of the slide is limited. Do not try to record a slide that contains too much material, such as a printed page from a journal. A rule of thumb is, "No more than 20 characters across, and no more than 10 lines down." With the equipment we are discussing, this guideline is at the extreme upper limit of acceptability.

Producing Your Own Programs

If you have no recording equipment of your own, it is time to go bargaining/borrowing again. That portable outfit that the local football coach uses probably includes everything you need. Most of these units have a microphone built into the camera and have automatic controls for audio and video levels. If you plan to shoot your program in a room, you will probably need extra lights. Just about anything that has a reflector around it will work provided you can direct the light to where you want it. Overhead fluorescent units will give enough light, but the picture will look somewhat dull and flat. Experiment with what you have until you are satisfied with the quality.

You cannot just take a camera into a room and start shooting and expect to end up with a program that communicates. If you are using the camera for psychiatric evaluations or for patient studies before and after treatment, you will not be working from a script. However, it still will be necessary to plan beforehand what you are going to try to do. Other situations are more controllable (for example, programs ex-

plaining low-sodium diets to cardiac patients or ostomy care to the family of an ileostomy patient), but you will need some previously thought-out guidelines to follow when recording your program.

Ideally, you should work from a prepared script. The script might be so detailed and elaborate that it instructs you on camera shots and what music to use to open and close the program. Usually, however, your script will consist of a vague outline of what is to be said, and it will be up to you to decide what kind of shots to use and whether you will need to prepare some graphic material. "Graphic material" can mean anything from a sign with the speaker's name printed on it to an ostomy appliance or an insulin syringe. Try to offer the viewer some variety in visual stimuli; remember that television combines sight and sound, so take advantage of it.

Your initial results may be rather primitive, but they will improve as you gain experience. Your finished program will not look like a network television production. Do not be discouraged. Show it to the type of audience for which it is intended, and observe the results. Does the program get your points across? Will it relieve some of the repetitiveness of explaining the same thing over and over? Can your audience understand the program's content? Has it stimulated them to ask more meaningful questions? If you can answer yes to some of these questions, then your program is not a failure. Once you have done a few, you will know how to prepare for future productions and what your limitations will be.

The best guide you can use is called the KISS principle: KEEP IT SIMPLE, STUPID. Keep your productions simple and to the point, and you will be successful. Also, keep them as short as possible. In most cases, attention wanes after ten minutes. If you think your program needs to be longer than ten minutes, try breaking it into several segments. The ten-minute limit is not an absolute guideline, but it is what we strive for in our instructional productions. It may be impossible to keep the program that short, but if you "think short," you will tend to work toward that goal.

Other Thoughts

Everything discussed in this article is something I have tried in one form or another at one time or another. True, cooperative arrangements for borrowing equipment should be used only sparingly; however, they can give you the chance to explore the use of television without committing a lot of funds to it initially.

If you do commit your institution to an ongoing program of television use, some thought should be given to the acquisition of software on a long-range basis. Many institutions have purchased expensive and elaborate television systems, only to discover that there were no funds to obtain or produce software for the system. Two fairly inexpensive listings of medical audiovisual materials are: Health Education Non-Print Media Catalog Listing, PO Box 90673, Nashville, Tenn 37209; and Medical Audiovisuals: Producers & Distributors, Welch Medical Library, Johns Hopkins University, 1900 E Monument St, Baltimore, Md 21205. These two listings provide sources to contact about availability of software; they do not supply the programs.

In this article, I have assumed that you have access only to the basic equipment. Do not let yourself be seduced by the technology available to you. If your institution decides to expand its capabilities, or if you would like to offer more refined productions, look very closely before you buy. The technology is moving so fast that no one, including the salesmen, can keep up with equipment changes. At present, the safest investment in basic equipment probably would be a 3/4-inch videocassette recorder and a color television set. These two items would give you something to use now and to build on later.

Many books and publications dealing with television are available. Your use of them depends on how far you want to delve into the subject; most books on television techniques contain basically the same information. Look around and see what you can find. Your local library is a good place to begin.

Mr. Bakula, TV Coordinator, Television Section, Division of Research and Education, Scott and White Memorial Hospital, Temple, TX 76501.

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Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in post-sympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

Effective: Management of nausea and vomiting and dizziness associated with motion sickness.

Possibly Effective: Management of vertigo associated with diseases affecting the vestibular system.

Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

The administration of meclizine to pregnant rats during the 12-15 day of gestation has produced cleft palate in the offspring. Limited studies using doses of over 100 mg./kg./day in rabbits and 10 mg./kg./day in pigs and monkeys did not show cleft palate. Congeners of meclizine have caused cleft palate in species other than the rat.

Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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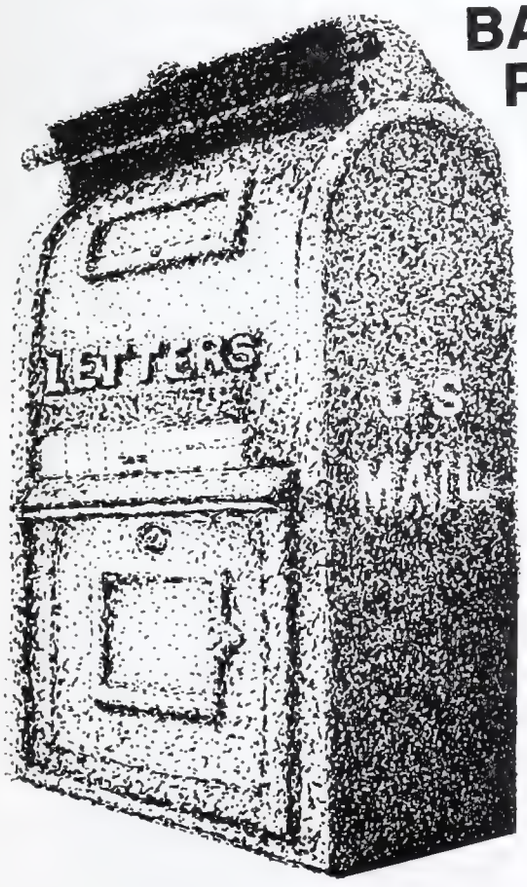

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A graded and monitored exercise program for senior adults

Shelly E. Liss, MD

The importance of exercise has never been as widely recognized as it is today. Considerable interest is expended in exercise programs for our youth. Programs for adults, consisting of jogging, tennis playing, and bike riding, are becoming more and more a way of life in the American community which has been known for its sedentary lifestyle. Benefits are generally considered to be cardiopulmonary as well as psychological, adding to general well-being and resistance to illness and injury. In no age group, however, is the need for exercise more obvious than in our older population. Our senior population grew up in an age of increased dependence on mechanical devices and generally has not benefited from the evolving interest in exercise. In addition, the medical community resists senior adults' attempts at exercise because of fear of cardiac or orthopedic complications and fear of professional responsibility.

If a generally accepted exercise program could be developed for senior adults, many benefits would ensue. The considerable number of fractured hips which occur in both the institutionalized and noninstitutionalized elderly, could very well decrease as cardiopulmonary function and lower extremity strength improved. Better conditioning also would reduce the number of accidental falls which occur when an older person cannot overcome abrupt and unexpected alterations in his environment.

Psychologically, the older person tends to feel himself increasingly imprisoned by his environment, as weakness secondary to muscular and cardiopulmonary deterioration progresses. This may be accompanied by psychological repercussions of depression, feelings of worthlessness, and hopelessness. The psychological uplift which rewards the younger jogger when he feels in good physical condition can also be enjoyed by the older person who is following a graded, progressive exercise program.

A physician is loath to initiate an exercise program in an older person who has not exercised in many years. The cardiac rehabilitation programs for post-myocardial infarction patients are generally too expensive, overmonitored, and inconvenient for most older people who simply want to improve their physical condition. However, more and more agencies that cater to senior adults, such as community centers, parks and recreation centers, and nursing homes, are seeking exercise programs suitable for their clients. Finding no recognized program, physical educators are improvising their own by trial and error. These programs may include relatively safe activities which frequently are insufficient to benefit the participants physically. In other programs, such as unmonitored water sports, the exercise may prove to be too strenuous for poorly conditioned older people. Occasional tragedies can easily dissuade the educators and agencies from continuing these exercise programs, and certainly can dissuade an older person from any further attempts at exercise.

As a specialist in physical medicine and rehabilitation, I was asked several years ago to recommend an exercise program for senior adults to be used at the Jewish Community Center in Houston. A reasonably thorough review of the literature turned up nothing in the way of pertinent articles or textbooks. It was necessary to develop a program which was safe and workable as well as effective and enjoyable. In deciding what mode of exercise would be used, I was limited by equipment.

Complicated or expensive equipment would not be generally available, and exercise out of doors would not be practicable every day. Hirschberg's "Stand-Up, Step-Up Program," originally designed for rehabilitation of hemiplegics, was taken for the basis of the exercise program.[1,2]

The resultant exercise program requires in equipment only a standard chair and a 6-inch step, which can be made with a few pieces of wood, some nails, and a minimal amount of carpentry experience. In addition, this approach was chosen for its ease of increasing the level of exertion as the physical condition of the participants improves, and for ease of pulse monitoring. Activities such as swimming and bicycling do not as readily lend themselves to progression and monitoring. The method of monitoring the participants is the technique generally used by the United States Air Force in its physical examinations and screening for cardiac problems. The radial pulse rate is determined at rest, immediately after exercise, and two minutes post-exercise, for the recovery phase. (A daily record should be maintained on each patient, Fig 1.) To ensure the elimination of high-risk participants or to screen participants

1. A daily record should be maintained on each patient.

NAME_____ PHYSICIAN _____

PHONE _____

DATE	RESTING PULSE	ACTIVITY	NO. OF TIMES	PULSE			
				IMMEDIATE	2 Min.	4 Min.	6 Min.

2. A letter and questionnaire is sent to each participant's physician.

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A Graduate, Monitored Physical
Conditioning Program for Senior Citizens

Date:_____

Patient:_____

Dear Doctor:

Your patient has requested enrollment in our physical fitness program for senior citizens.

This program consists of exercises which are performed either standing from a chair or stepping up and back on one step. There are several graduated levels of exercise beginning with five untimed stand-ups from an average chair. Participants will progress at their own rate and will rise only to their own maintenance level. Resting pulse, pulse immediately after exercise and two, four and six minutes recovery pulse will be carefully monitored.

If any unusual symptoms or pulse alterations occur, the participant will be urged to contact you as soon as is practical.

If your patient has any of the following conditions, please enter below:

1) Resting pulse over 100_____

2) Resting pulse under 60_____

3) Irregular pulse rhythm_____

4) An orthopedic condition which limits joint motion of activity_____

If yes, please describe_____

_____

5) Other pertinent diagnosis_____

_____

Please feel free to contact staff with any questions or comments.

6) Comments_____

_____

Sincerely,

Recreational Director

My patient may enter the above described program.

_____
(Doctor's signature)

The following physician(s) assisted in the planning and organization of this program:

_____

_____

_____

for abnormal but acceptable conditions, a letter and questionnaire should be sent to each of the participants' physicians, describing briefly the program and requesting some minimal information for reference by the supervisor of the exercise program (Fig 2).

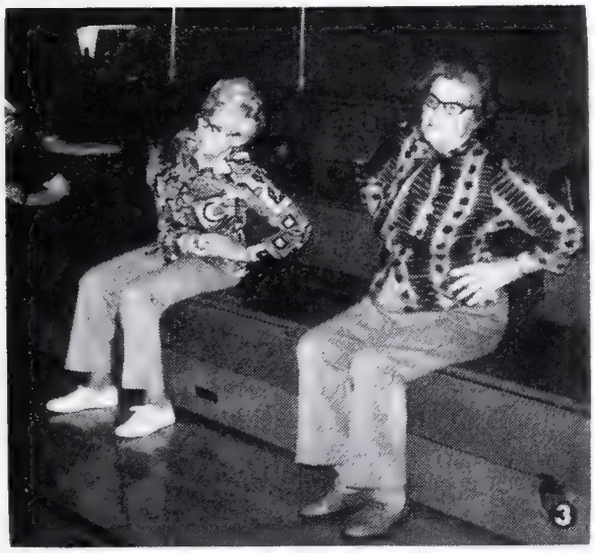
Supervisors of the exercise program should be trained to take pulses. They should be told to exclude participants whose resting pulse rates are less than 60 or over 100 beats/minute without specific approval by the participant's physician. Participants with irregular pulses must also receive approval in advance from the physician. Occurrences during the exercise which require an immediate cessation of further exercise and referral back to the physician include a post-exercise pulse increase of greater than 50 beats/minute for minimal exercise, the development during exercise of an irregular pulse, or obvious symptoms such as labored respiration, chest pain, or other severe discomfort.

The exercise program is divided into three phases:

Phase Number 1: The participants go through a series of breathing exercises, stretching exercises, and range of motion exercises generally employed by physical educators in "warming up." This is usually performed with the group sitting in chairs or benches and includes rolling the head (with care because of possible kinking of the carotid arteries), and active motion of the various joints of the arms and legs, as well as the trunk.

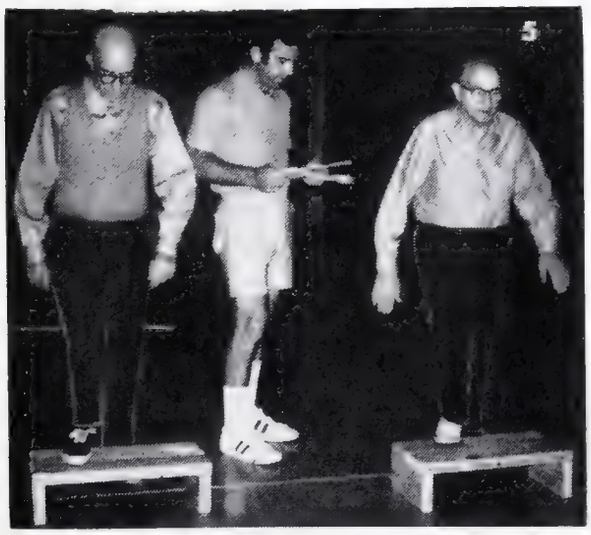
Phase Number 2: The stand-up, step-up program. The resting pulse rate is taken for all beginners in the program and for those persons about to be started at a new level of exercise. In addition, the immediate post-exercise pulse rate and the two-

minute recovery pulse rate are also taken. The participants are asked to attend classes three days a week but to perform their stand-up, step-up program at home daily until they have reached a level of exercise which is consistent with good physical condition. When this level has been reached, three times a week in class is considered sufficient to maintain the level of conditioning acquired. As new participants are added to the class, staggering is attempted so that pulse rates of each participant need not be monitored at each class, minimizing the number of supervisors required for pulse monitoring. The stand-up part of the exercise is performed with the participant seated in a standard chair and standing without assistance and without using the arms. If, for any reason, the participant is unable to stand without using his hands, one or more telephone books may be placed in the chair, allowing the participant to rise unassisted. The books can be gradually re-



3. Breathing, stretching, and range of motion exercises help participants to "warm up."

4. At level 1 of the stand-up, step-up program, the participant sits in an ordinary straight chair, then stands up without assistance. This is repeated five times.



5. A 6-inch stair is used for the step-up exercises. Participants at level 2 step up and back down five times. The number of stand-ups and step-ups are increased for each participant according to the individual's ability.

duced during the exercise program as quadriceps strength improves, until the participant is able to arise unassisted. Participants stay at each level for at least one week before advancing, unless the exercise is obviously far below the participant's ability. The levels are as follows:

Level 1: Stand up five times (at comfortable speed). Pulse is taken immediately for ten seconds, multiplied by six, and recorded.

Level 2: Step up five times (6-inch stair). Pulse is checked and recorded. (Note: The step-up exercise is performed to the count of four: count 1, placing the dominant foot on the step; count 2, bringing the other foot up to the step; count 3, bringing the dominant foot down; count 4, bringing the other foot down.)

Level 3: Stand up ten times, as before.

Level 4: Step up ten times, as before.

Level 5: Stand up 15 times, as before.

Level 6: Step up 15 times, as before.

Level 7: Repetitions are increased individually, as each participant is able within acceptable pulse response and without symptoms of discomfort. Each participant should be maintained at his appropriate maximal level. Groups are alternated between stand-ups and step-ups on alternating meeting days, although participants within each group may be at different levels.

Phase Number 3: After completing the stand-up, step-up program and having acceptable pulse rates, the participants are then requested to walk at a comfortable pace about the room or gymnasium in a group. Participants will begin walking slowly, only performing a few "laps." As each participant's condition improves, he will pick up the pace of his walking and increase the number of laps. Competition should be discouraged and each participant is requested to walk within the limits of his own endurance. If questions arise concerning the participant's response to the walking phase, the pulse may be monitored to evaluate whether or not the participant is staying within the level of his ability.

When this exercise program is planned to coincide with mealtime, as in nutrition programs, physicians should recommend that the exercise program precede the meal.

This exercise program, originally designed more than six years ago, has been functioning continuously at the Jewish Community Center in Houston and is now being performed at several nursing homes, park and recreational centers, and retirement centers. In each case, the participants have expressed considerable appreciation for their improved physical and psychological well-being. No study has yet been performed on the effects of the improved physical condition in prevention and response to illness and injury. Review of the pulse responses of the participants does not reveal demonstrable improvement in pulse rate, as the level of exercise is minimal to begin with and progresses minimally. However, the participants have increased their exercise tolerance without untoward signs or symptoms. Supervisors have enjoyed their work in the program, as well as the rapport which has developed with the participants. When the program was initiated, it was felt that special entertainment, such as guest speakers, games, awards, and special activities, would be needed to keep the exercise program from becoming monotonous. This has not been the case; the participants have been extremely enthusiastic, and regularly recruit newcomers into the program.

The major problems in implementing the program occur in nursing homes. Generally, there tends to be some question as to who should supervise the exercise program in nursing homes. It is recommended that the exercise program be divided into groups, with the more agile and mobile nursing home residents meeting separately from the more confused and sedentary residents. There is a general disinclination by nursing home administrators to allow recreational directors and volunteers to supervise the exercise program and, generally, the volunteers are quite reluctant to supervise the programs without professionals. The supervision falls to the nurse or physical therapist, who soon becomes restless with a long-term maintenance type program and slowly begins to find "more important" professional activities that need attention. It is recommended that the alert, mobile residents be initially supervised by the professional staff, with assistance from the recreational personnel and volunteers, delegating more and more responsibility to the nonprofessionals until the professionals are acting primarily in a consulting capacity. The exercise program for the confused, sedentary nursing home population should remain in the hands of the professional staff.

It is my recommendation that physicians who are active in community programming in nursing homes take steps to institute exercise programs, similar to the one described in this article, for the senior adults. The monitoring aspects of the program not only pick up untoward physiological reactions, but also tend to give the participants a feeling of security, enhanced by the fact that the program is recommended by physicians in the community. Of course, cardiopulmonary emergencies can occur at any time, and it is possible that one might occur during or shortly after an exercise program. If each participant has been cleared by his personal physician and has been monitored reasonably along the lines specified, unfortunate incidents can be minimized. Any physician who watches the development of such a program and talks with the participants after they have had an opportunity to benefit will become convinced that many psychological and physical benefits do occur.

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Pulmonary pseudotumor caused by actinomycosis

James P. Dorman, MD; Kit V. Arom, MD, PhD

A case of pulmonary pseudotumor caused by actinomycosis is presented. The rare occurrence and nonspecific signs of this entity make preoperative diagnosis difficult.

Thoracic actinomycosis is an uncommon disease first described in 1882 by Ponfick. Approximately 30 cases of the pulmonary form of actinomycosis, which simulates carcinoma, have been described in the English literature. Accurate preoperative diagnosis is unusual in the absence of the characteristic draining sinus tracts combined with the radiographic appearance of a pulmonary neoplasm. This case is representative of the pseudotumoral form of thoracic actinomycosis, and is presented to remind surgeons of its occasional occurrence.

Case Report

A 49-year-old pottery salesman complained of swelling of the left side of the neck associated with fever and nonproductive cough for three weeks. He had lost 2.3 kg (5 lb), and had pain in the left anterior chest. His temperature was 38.6 C (101.4 F). The left side of the neck was swollen, with induration extending from the supraclavicular fossa to just behind the left ear. Bronchial breath sounds were noted at the left lung base. The white blood cell count was 12,600 with a shift to the left. The alkaline phosphatase level was 144 mg/100 ml; otherwise, the serum profile was normal. A roentgenogram of the chest revealed a mass in the left lung field which appeared to be in the lingula (Fig 1).

Sputum cultures grew no organisms, and results of skin tests were normal. A biopsy specimen from the neck mass was described as being inflammatory with no neoplasm. No pathogens were cultured. Bronchoscopy showed no abnormalities, nor did sputum cytology.

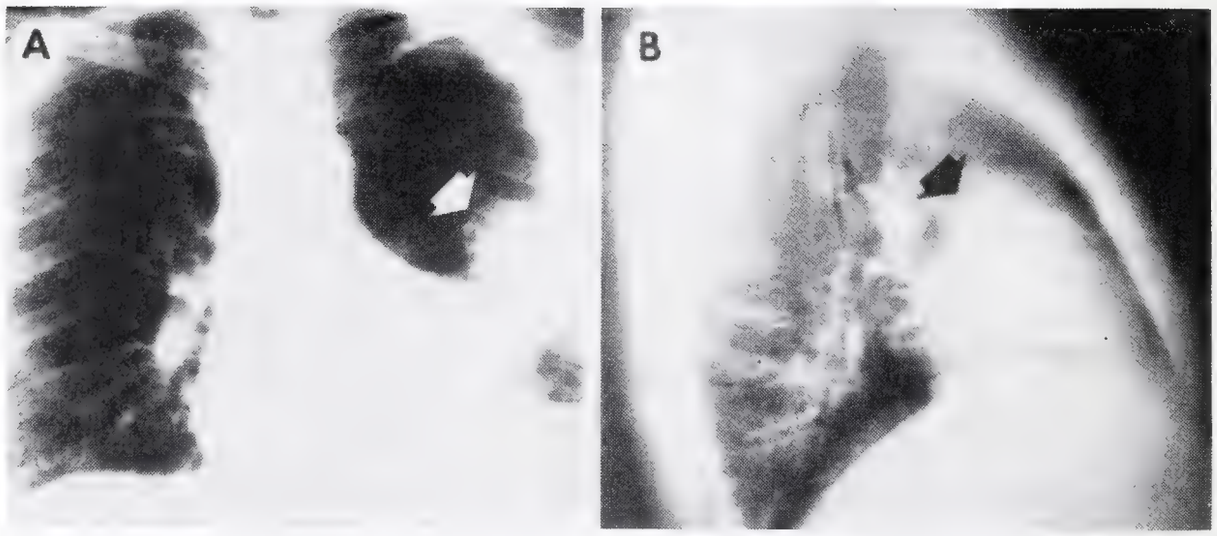
A thoracotomy on the left revealed a mass in the lingula which was adherent to the pericardium and to the fourth rib anteriorly. The left upper lobe of the lung, a small segment of pericardium, and the adherent fourth rib segment were resected en bloc. Microscopic sections of the tissue demonstrated fibrosis, chronic inflammation, and the "sulfur granules" characteristic of actinomycosis (Fig 2). After an uncomplicated postoperative course, the patient was started on long-term therapy with tetracycline, 2 gm per day orally. There was no evidence of recurrence three months postoperatively.

Discussion

Actinomycosis is a chronic granulomatous disease caused by *Actinomyces israeli*. It is characterized by microabscesses with surrounding fibrosis, and by the "sulfur granules" from which the "ray fungus" gets its name. The fungi have never been recovered from nature, but are commonly found in the mouth and bronchial washings of patients having no evidence of the disease. Cervicofacial, abdominal, and thoracic forms of the disease are recognized, with pulmonary actinomycosis representing about 15% of all cases.

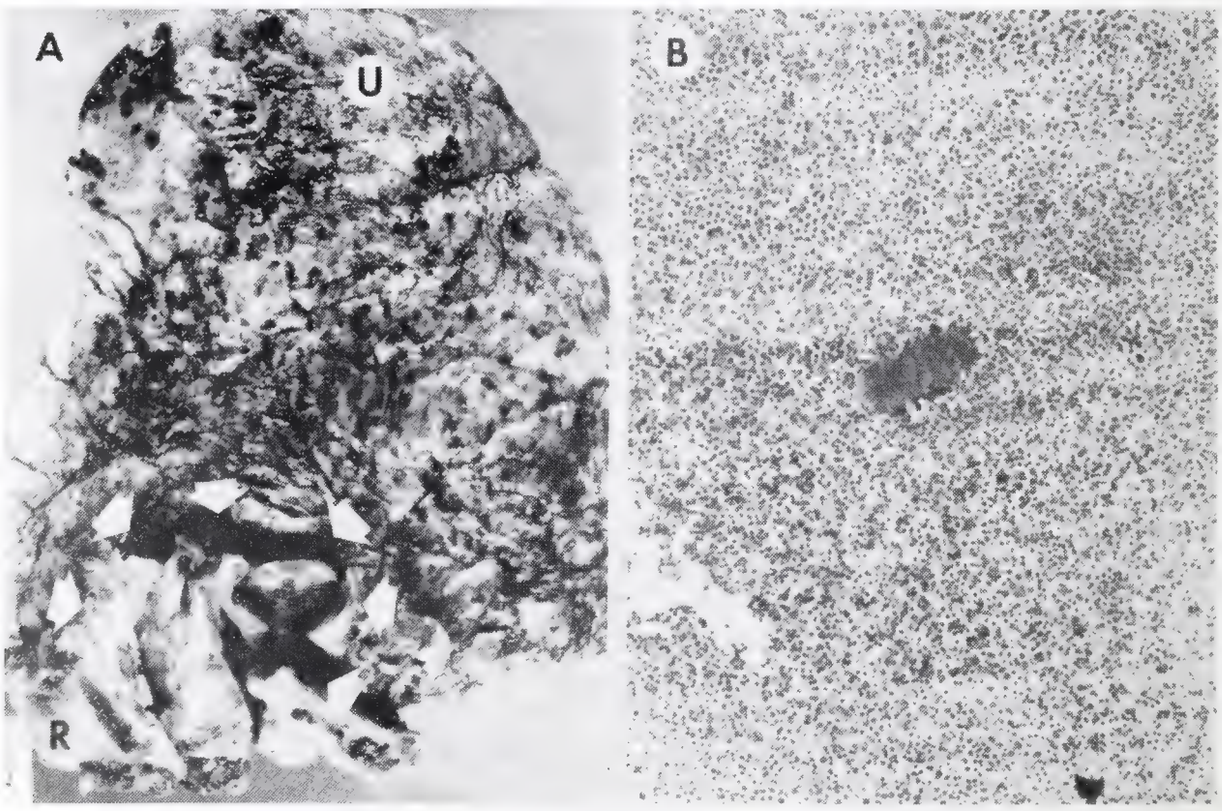
In the thoracic form, the primary site of infection is intrapulmonary, with progressive extension to involve the pleura and chest wall. Subsequently, cutaneous fistulas develop. Involvement of the mediastinum, esophagus, heart, and vertebra have been reported.

Roentgenograms of the chest are not diagnostic, and the disease can easily be



1. Roentgenograms of the chest, posterior-anterior and lateral views, showing irregular, peripheral density in the left anterior lung field (arrow). Preoperative diagnosis was carcinoma of the lung.

2a. Lateral view of the left upper lobe (U) showing a portion of the left fourth rib (R). The tumor is encircled by arrows. b. Photomicrograph displaying a "sulfur granule" surrounded by chronic inflammation diagnostic of actinomycosis.



confused with tuberculosis or carcinoma unless the characteristic sinus tracts are present or a biopsy specimen shows the ray fungus.

The outcome of thoracic actinomycosis was usually fatal until the development of sulfonamides.[1] Penicillin[4] is now the drug of choice, with tetracycline and clindamycin as good alternatives. Penicillin is commonly administered in doses of 8 to 12 million units per day for four to eight weeks.

Pulmonary pseudotumor caused by actinomycosis is uncommon. Villegas and Sala[6] reported a similar case and reviewed the literature. In those cases reviewed, the preoperative diagnosis was noted to be consistently inaccurate. McQuarrie and Hall[2] reported three cases in which pulmonary resections were done and actinomycosis was diagnosed by microscopic examination of the pseudotumor or by culture. Moore and Scannell[3] added two cases of actinomycosis simulating lung cancer. Prather and associates[5] reported 12 cases of thoracic actinomycosis; 9 of the 12 patients underwent surgical treatment. Five patients underwent resections because of a presumptive diagnosis of carcinoma (three had pulmonary resections), and the accurate etiology was determined by histological section.

Pulmonary resection is not the primary treatment for pulmonary actinomycosis. The recommended therapy is with antibiotics followed by empyema drainage or resection of severely damaged lung tissue or fistulas. Pseudotumoral forms of the disease are uncommon, but they present a diagnostic problem that usually is resolved only after pulmonary resection.

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Dr. Arom, Assistant Professor, Dr. Dorman, Division of Cardiothoracic Surgery, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284.

Persistent psychotic phenomena following one dose of pentazocine

Gary J. Byrd, MD; Francis J. Kane, MD

In 1969, Edison reported a case in which hallucinations and mental confusion followed a single dose of pentazocine (Talwin).[1] Forrest recently cited five studies in which psychotomimetic effects were observed after oral pentazocine use.[2] Two reports from hospital-based drug-monitoring facilities have again drawn attention to the incidence of neuropsychiatric reactions to this drug, especially in emotionally unstable or drug-abusing individuals.[3,4] We present here a patient with no history of chemical abuse who experienced, after a single 30-mg injection of pentazocine, psychotic symptoms which persisted well beyond the usual period of toxic psychosis.

Case Report

A 52-year-old white man was seen in an orthopedic intensive care unit to which he had been admitted for evaluation of low back pain and numbness in the legs. The patient had never been hospitalized for any psychiatric condition. His only known medicinal allergy or sensitivity was to penicillin, and he had never received pentazocine. He denied any previous visual or auditory hallucinations; likewise there was no history of excessive use of prescription medication, illicit drugs, or alcohol. There was no family history of psychiatric illness. Systemic arterial hypertension had been detected when the patient was 21 years old, and he had sustained a minimal cerebrovascular accident at age 35. This history was verified by the patient's wife, who related that he had seen a psychiatrist as an outpatient some six years previously in an attempt to moderate his temper, which she described as explosive. She said that her husband tended to go from physician to physician because of conflicts with them. She also reported that his gait was occasionally unstable, and that he tended to exaggerate.

The patient was scheduled to have a laminectomy at the L4-L5 level. He continued to receive diazepam, 5 mg orally, four times a day, which he had been taking as a muscle relaxant for several months. In addition, he was given an intramuscular injection of 30 mg pentazocine and 25 mg promethazine HCl. Two hours after the injection, the nursing staff recorded that the patient had become acutely restless, and 6½ hours later they added that he had become very confused and had begun to experience auditory hallucinations.

About 36 hours after the injection, he was seen in psychiatric consultation by one of the authors. At that time, the patient was disoriented as to time, was experiencing auditory hallucinations, and described thought withdrawal. He demonstrated concrete thinking, circumstantiality, and tangentiality, while denying illusions or visual hallucinations. Vital signs and results of laboratory studies were within normal limits. Since promethazine HCl is a member of the phenothiazine group of antipsychotic drugs, and since hallucinations have not been reported among its side effects, it was concluded the patient's acute toxic psychosis had occurred secondary to the pentazocine.

The laminectomy was performed as scheduled two days after the psychiatric consultation. During the next 48 hours the auditory hallucinations continued in the form of voices from the wall, which the patient could clearly distinguish from real voices. He had vivid, troubling dreams which disturbed his sleep. He was reexamined psychiatrically two days after surgery, and aside from missing the date by two days, was well oriented. His senso-

rium cleared rapidly and he was discharged 20 days after surgery.

The patient returned to work five weeks later and gradually resumed full-time duties. The psychiatric symptoms have not recurred during the year since his discharge from the hospital.

Discussion

The immediate development of delirium in response to a 30-mg dose of pentazocine (Talwin) could be explained as a direct toxic effect of the drug upon the central nervous system (CNS) via interaction with brain monoamines, as suggested by the work of Holtzman and Jewett,[5] or in a manner analogous to that of the known psychotomimetic drugs. However, the prolonged response with eventual clearing and nonrecurrence of psychotic symptoms suggests the possibility that there may have been two overlapping responses: (1) acute organic brain syndrome secondary to the drug's toxic effect on the CNS, and (2) an interaction of the effects of pentazocine with the basic underlying personality structure or with existing, but normally subclinical, neuronal damage. The pentazocine may have weakened defense mechanisms already taxed by physical illness, hospital confinement, and impending surgery. The absence of any similar previous psychiatric problem, and the relatively rapid return to, and year's maintenance of, the premorbid level of functioning without specific psychiatric treatment do not suggest the excerbation of a chronic, preexisting psychosis. The elimination of infection, other system failure, or disordered metabolism as basic or precipitating etiologies completes the establishment of a cause-and-effect relationship between pentazocine (Talwin) and the psychotic reaction.

Summary

A 52-year-old white man with no previous psychotic episodes and no history of sensitivity to pentazocine (Talwin) experienced an acute organic brain syndrome after receiving a single, 30-mg, intramuscular injection of that drug. The psychotic symptoms persisted for seven days, cleared spontaneously, and have not returned in a year's time. Two mechanisms of psychic dysfunction are postulated: (1) direct response to pentazocine's toxic effect on the CNS, and (2) lowering of normal psychiatric defenses during a period of high stress, allowing normally repressed material to erupt into consciousness.

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Dr. Byrd, Assistant Professor of Psychiatry; Dr. Kane, Professor of Psychiatry, Baylor College of Medicine, Houston, TX 77030.

Reprint requests to Dr. Byrd.

Malpractice insulation in Texas

L. A. White, Jr., MD, JD

With the ever increasing magnitude of judgments that are being awarded in malpractice suits, it is not inconceivable that Texas physicians will be (if they have not already been) subjected to judgments greatly in excess of the protection provided by even a large malpractice insurance policy. With this in mind, it behooves the physician to insulate what property he can from such a judgment. This concept is not at all new, since the vast fortunes of the old-rich (as opposed to the new-rich) have been so shielded for decades by use of such devices as spendthrift trusts.

The easiest way to have property exempt from judgments is to be born rich and to share property left in spendthrift trusts.* A spendthrift trust arises when property is transferred to a trustee (for example, a bank) for the benefit of another, the beneficiary, with the provision that none of the principal or income of the trust shall be subject to execution, attachment or garnishment, or forced sale, and shall not be assigned, transferred, alienated, or anticipated by the beneficiary. By such a provision the trust property and income can be used for the benefit of the beneficiary but cannot be reached by his creditors, nor can the trust property or income be reached by a trustee in bankruptcy should the beneficiary of the trust voluntarily or involuntarily become a bankrupt. In such a way do our laws favor inherited wealth over that which a man earns for himself, since the general rule is (at least in Texas) that if a person transfers property in contemplation of entering into a hazardous speculation or to avoid the seizure of the debtor's property because of contemplated liability for future trespasses, such transfer is void against present and future creditors (*Code vs Terrell,* 71 Tex 549, 9 SW 668).

Accordingly, a person who is not the beneficiary of a spendthrift trust may only personally insulate from forced sale that property (not inconsiderable) which qualifies for an "exemption"† under the statutes of the State of Texas.

Under Article 3833, *Revised Civil Statutes of Texas,* if a homestead is *outside* of a city, town, or village, there may be exempt up to 200 acres together with the improvements thereon if it is the homestead of a family. The homestead of a single person, if outside the city limits, is exempt up to 100 acres together with improvements. There is no limit to the value of improvements (for example, houses, barns, outbuildings) that are exempt, nor is there any limit on the value of the 200 acres of a family's homestead outside a city, town, or village.

If the homestead lies within a city, town, or village, the land is exempt up to a $10,000 value at the time of designation as a homestead if for a family, or up to $5,000

* Although termed a "spendthrift trust," the designation is more historical than actual under modern usage. A "spendthrift trust" is a device where property is conveyed to a trustee or trustees for the benefit of some beneficiary with a provision which prevents the property's being reached through execution or other similar device by a creditor of the beneficiary.

† An exemption is a right given by law to a debtor to retain a portion of his property free from the claims of his creditors. It has been said that the purpose of exemption laws is to afford protection to a person in the pursuit of a lawful occupation and to assure the family of a debtor the shelter of a home, the means of securing a livelihood, and the earnings of its natural head (*Rodgers vs Ferguson,* 32 Tex 533). Another court has observed that the exemption laws are passed for the humane purpose of protecting the poor, unfortunate, and thriftless from creditors who would deprive the debtor and his helpless family of the means of subsistence—an apt description, possibly, of the unfortunate victim of a malpractice judgment.

if for a single individual. All improvements on the homestead are exempt irrespective of their value. If a homestead in a city, town, or village for a family costs more than $10,000 (or is valued at more than $10,000 at the time of designation of the homestead) at the time of forced sale under a judgment, the amount of exemption with respect to the land is proportional to the total value of the land in the same proportion that $10,000 bears to the value of the land at the time such land was designated as a homestead. For example, if a homestead lot was worth $15,000 at the time of its designation as a homestead and increased in value to $30,000 at the time of forced sale, the lot would be exempt to the extent of an undivided two-thirds, or $20,000 plus the entire value of the improvements. The improvements are totally exempt (*Hoffman vs Love,* 494 SW 2d 591, 1973, writ refused, n r e 499 SW 2d 295, 1973).

Note well that if the value of the homestead lot is $10,000 or less at the time of designation, then the entire homestead, including improvements, is exempt from forced sale; but if the lot is worth more than $10,000 at the time of designation as a homestead, then the house and lot can be sold at forced sale although the owner is entitled to retain the proceeds of the sale attributable to the house together with the first $10,000 of the sale price attributable to the lot, and may also retain that portion of the sales price of the lot which represents the increase in value of a $10,000 portion of the lot.

Personal property is exempt under Article 3836, *Revised Civil Statutes of Texas,* as follows: For a family, up to $30,000 worth, and for a single person, up to $15,000 worth (both in the aggregate only) of the following kinds of personal property:

1. Furnishings of a home, including family heirlooms, and provisions for consumption;
2. All of the following which are reasonably necessary for the family or single, adult person, not a constituent of a family: implements of farming or ranching; tools, equipment, apparatus (including a boat) and books used in any trade or profession; wearing apparel; two firearms; and athletic and sporting equipment;
3. Any two of the following categories of means of travel: two animals from the following kinds with a saddle and bridle for each: horses, colts, mules, and donkeys; a bicycle or motorcycle; a wagon, cart, or dray, with harness reasonably necessary for its use; an automobile or station wagon; a truck cab; a truck trailer; a camper-truck; a truck; a pickup truck;
4. Livestock and fowl not to exceed the following in number and forage on hand reasonably necessary for their consumption: 5 cows and their calves, 1 breeding-age bull, 20 hogs, 20 sheep, 20 goats, 50 chickens, 30 turkeys, 30 ducks, 30 geese, 30 guineas;
5. A dog, cat, and other household pets;
6. The cash surrender value of any life insurance policy in force for more than two years to the extent that a member or members of the family of the insured person or a dependent or dependents of a single, adult person, not a constituent of a family, is beneficiary thereof;
7. Current wages for personal services.

Public policy does not countenance devices by which one frees his own property from liability for his debts or restricts his power of alienation of it; and it is accordingly universally recognized that one cannot settle upon himself a spendthrift or other protective trust, or purchase such a trust from another, which will be effective to protect either the income or the corpus against

the claims of creditors or to free it from his own power of alienation (76 Am Jur 2d §168). This means that a professional man (physician) John Doe may not create a spendthrift trust free from attack by his creditors in respect to which he is the beneficiary. But John Doe may create a valid spendthrift trust free from attack by his *future* creditors, if the beneficiaries are persons other than himself—for example, his wife and children.

The principle just stated seems to be generally the rule in Texas.

Additionally, there may exist two further methods that will permit property to be insulated from forced sale in addition to the insulation provided by the exemption statutes. It has been held that where an employer sets up a profit sharing plan with the funds being placed in a spendthrift trust,‡ a judgment creditor of an employee could not reach the employee's interest in the profit sharing funds. The reasoning here was that the profit sharing funds belonged to the employer and thus it was not in violation of the principle that a settlor of a trust created for his own benefit cannot prevent his own creditors, either present or future, from having access to the funds or property (*Hines vs Sands,* 313 SW 2d 275, 1958). Where the employer is a professional corporation it is possible, but somewhat doubtful, that a court will reach a similar conclusion.

The recent amendments to the community property laws of the State of Texas quite probably provide a method through which substantial property might be insulated from judgment creditors.

In Texas all property acquired by a married couple is community property unless it is acquired by gift, devise, or descent. Accordingly, income from a profession such as medicine or the law is community property.

Since Jan 1, 1974, the laws of Texas have permitted, for the first time in this state, a partition between husband and wife of community property. This partition is accomplished by means of an agreement in writing, signed and acknowledged by both parties, and filed in the deed records of the county of their residence (Vernon's Texas Family Code, Sec 5.42, *Revised Civil Statutes of Texas*). This does not remove property from execution by existing creditors, but does put it beyond reach of future creditors of the spouse from whom the property is partitioned away. The partition agreement must be recorded in the deed records of the county where any real property partitioned is located, since the partition is not effective as to third parties with respect to real estate unless it is recorded in the deed records of the county where the real estate is located. The property partitioned becomes the *separate property* of the spouse to whom it is partitioned. This circumstance—the provision that after the partition the property becomes the *separate property* of the spouse to whom the property is partitioned—is of the utmost significance. A malpractice judgment is a judgment on a tort claim for which the other (nontortious) spouse is not liable, and under the Family Code §5.61, a spouse's separate property is not subject to liabili-

‡ The typical spendthrift provision in a profit sharing trust is expressed in some form of the following language: "The assets which are held by the Trustee hereunder are for the purpose of providing for the support of Participants of the Plan upon their retirement. No benefit payable at any time hereunder shall be subject in any manner to alienation, sale, transfer, assignment, pledge, attachment, garnishment or encumbrance of any kind. Any attempt to alienate, sell, transfer, assign, pledge, or otherwise encumber any such benefits, whether presently or thereafter payable, shall be void."

ties of the other spouse unless both spouses are liable by other rules of law. All of the community property is subject to tortious liability of either spouse incurred during marriage. After partition only the husband's community property and his separate property are liable for his torts.

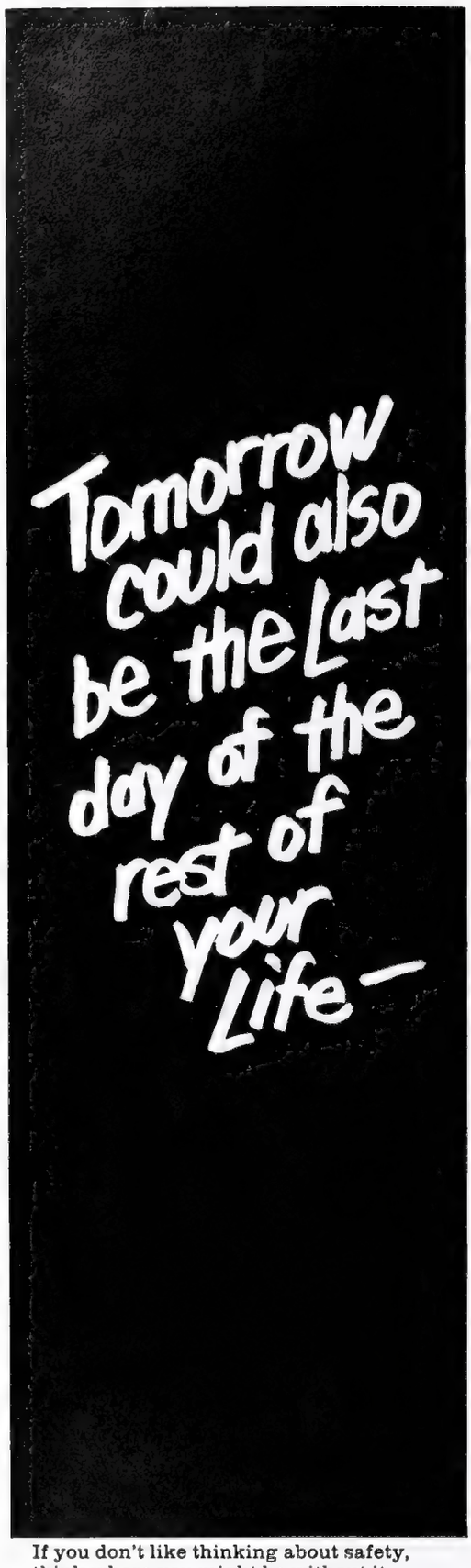
But the community property can be partitioned every year. If a wife should set up a spendthrift trust with her separate property (which prior to partition was community property) then such property and its income would in all probability be valid as against future judgment creditors of the husband including those who might later recover judgment against the husband in a malpractice action. In this connection, however, any physician contemplating creation of a trust or partition of community property is cautioned to secure competent legal advice from a lawyer familiar with estate planning and with the doctor's own personal situation, to insure that the doctor does not encumber property needed for collateral and to give specific consideration to various other problems which could be involved.

In the case of a malpractice judgment against a person which exceeds the amount of his malpractice insurance (or in the case of the total absence of malpractice insurance) the judgment debtor could discharge the judgment by taking bankruptcy except in the infrequent instance of a judgment for an intentional tort.§ Property that is exempt from execution by judgment creditors cannot be reached by a trustee in bankruptcy. Bankruptcy may accordingly provide a way to wipe the slate clean in respect to a malpractice judgment while leaving spendthrift trusts and their properties intact. And the threat of elimination of a malpractice judgment by bankruptcy could also influence the claimant or judgment holder to settle a malpractice claim before judgment, or to settle a judgment after suit, for some reasonable sum within greatly reduced malpractice policy limits.

Drastically reduced malpractice policy limits would, of course, substantially reduce malpractice policy premiums, and drastically reduced malpractice policy limits could conceivably reduce malpractice judgments substantially, since low limits on malpractice coverage ultimately become known to the general public and accordingly tend to eliminate a jury attitude of "What the heck—the insurance company will pick up the tab."

Dr. White, 2416 Juniper St., Amarillo, TX 79109.

§ The classic malpractice judgment is predicated upon negligence and not upon an intentional injury.



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National Safety Council

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Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

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Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

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Doctor-hams: providing the invisible link

Once past the lingo which baffles "lay" ears with talk of sun-spot cycles, nets, and frequencies, one can discover some of the most fascinating human interest accounts and real life dramas in the world of "doctor hams."

Most recently, K5CY, also known as Dr. Mervin H. Grossman, was one of several physician ham operators involved via amateur radio in rescue operations for the Guatemala earthquake victims. He spoke directly to the Guatemalan ambassador to Venezuela in Caracas. The medical needs of the stricken Central American country were relayed to physicians and relief workers across the United States.

Dr. Grossman has many such stories. Once, he arranged a consultation between a local surgeon and a missionary physician in Central America. Another time, he assisted in obtaining special medication needed by doctors in South America. For many missionaries, short wave radio is the only link to the outside world.

Right now, most of the Dallas pathologist's time is devoted to the 10th annual meeting of "MARCO" scheduled for June 25-26, preceding the American Medical Association's annual convention in Dallas.

MARCO, the Medical Amateur Radio Council, Ltd, is an international organization of more than 500 amateur radio operators including approximately 30 Texas members. While MARCO members have made headlines for dramatic roles in times of natural disasters and other emergencies, they are often the unsung heroes helping to provide diagnostic and material assistance, to unite loved ones, or just to exchange an idea with a fellow doctor.

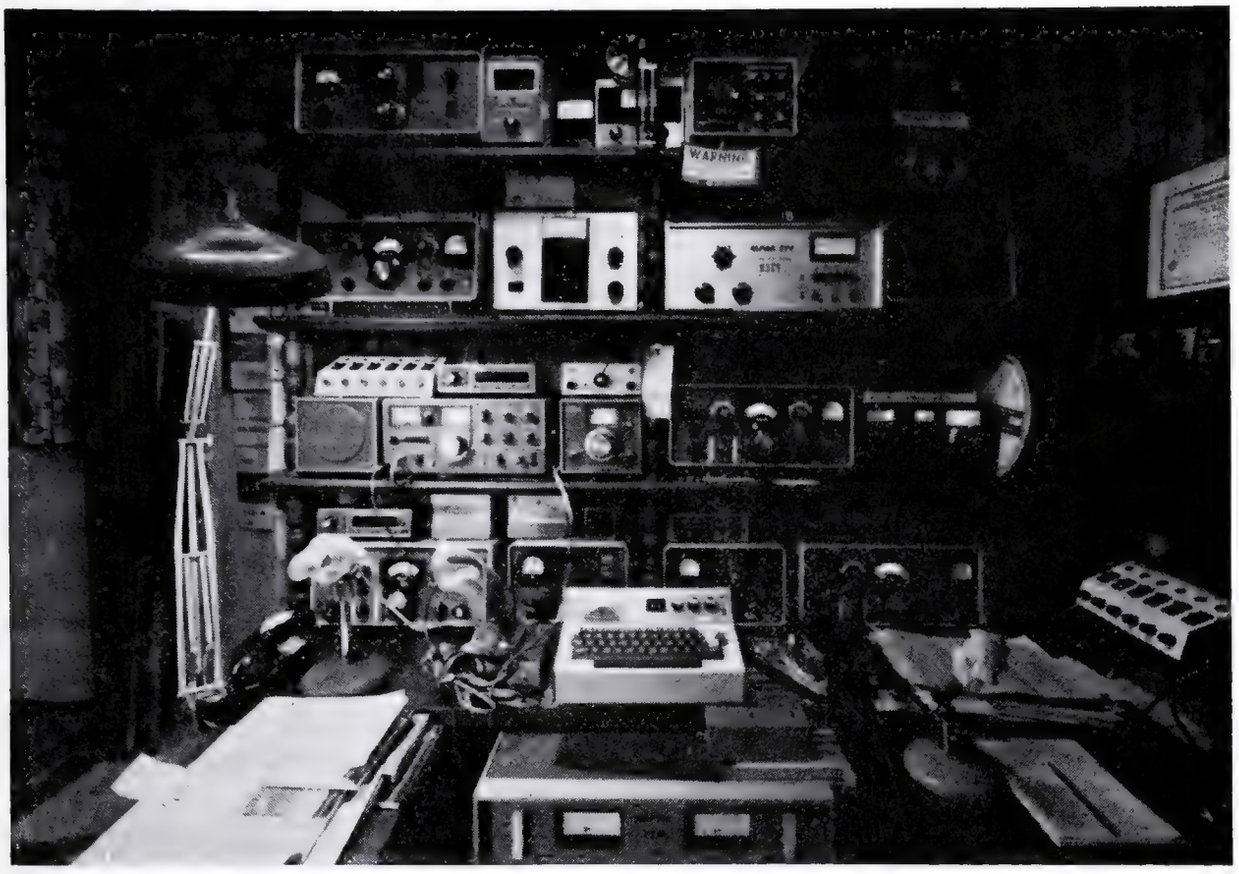
MARCO was founded in 1966 to provide an organized means for the exchange of scientific and medical-electronic information. The organization has quite a reputation for speed in emergencies. Its members can arrange for the delivery of emergency medicine halfway around the world in a very short time. Also, in recent years there has been considerable expansion in the use of communications science to broaden the range and scope of health services, especially in medically underserved isolated communities. Members of MARCO include doctors of medicine and surgery, doctors of dental surgery, doctors of veterinary medicine, doctors of osteopathy, or the equivalent foreign degrees.

Practicing physicians are not always at their radio sets, so MARCO members rely on auxiliary personnel to receive and relay calls to them. Calls are collected throughout the day from relay operators around the world by a network MARCO member in Florida. Each evening at 8 pm (CST), MARCO members check in with network control and calls are parcelled out to the appropriate physicians. In case of emergency, the relay personnel have a listing of MARCO members and their specialties and contact the nearest MARCO physician to respond to the call.International members check in with the network on Sunday afternoons.

Not all of the doctor ham's time, however, is directed at solving medical problems. The physician radio amateurs who related their experiences to *Texas Medicine* most often mentioned as a benefit the pleasure of contacting and becoming acquainted with medical professionals around the world. For the retired physician, MARCO is a chance to talk shop and keep in touch with the field. There is a bond of camaraderie among the hams evident to outsiders.

Getting involved

Dr. Grossman said that the technical knowledge needed for radio operation



Dr. Grossman's amateur radio equipment, a sophisticated set-up, has been accumulated over many years. As a network control person, he has several pieces of duplicate equipment for his MARCO work. Prominent in the center of the picture is the code sending machine which resembles a typewriter. To the right is his satellite equipment. Other equipment includes antenna tuners, oscilloscope, transmitters, amplifiers, speakers, patch controls, microphones, a portable transmitter-receiver, and other technical devices necessary for his wide range of amateur radio activities. A beginner ham, however, needs only a minimum of equipment.

varies for different types of licenses. A beginner can obtain a novice license which confines one to Morse Code activity. In international communication, many children from age 12 years and up obtain this license. Dr. Grossman also told of a 75-year-old woman who just obtained her novice license. In this country, amateurs must learn amateur radio rules and regulations of the Federal Communications Commission as well as technical aspects of the operation. Dr. Grossman himself was recently assigned his two letter call signal on the basis of having been licensed for more than 25 years and having passed the highest class of exam, the Amateur Extra.

He recommended that a person interested in getting started in the hobby contact a ham operator or amateur radio club to find out the steps to take in becoming licensed.

Science and electronics

The program for the upcoming annual meeting reflects the mixture of scientific and electronic interests of the MARCO members. Scientific sessions will feature the chairman of the Department of Medical Computer Science at The University of Texas Health Science Center at Dallas, the medical director of the Kaiser Foundation on Communication for Missionaries in the "Bush," the president of the Young Ladies' Radio Amateur League of the World, and the chief of radio communications of the Dallas Fire Department. Among the high-

lights will also be a demonstration of disaster messages and medical consultations through the use of the two orbiting amateur radio satellites.

And there is bound to be tale-swapping. It seems every ham has his share of interesting events.

Dr. Harvey Renger (W5NPW) of Hallettsville has been able to tell men in the Army or Navy of a child's birth hours before arrival time. Although this sounds confusing, it is possible for a father in Hawaii to learn of his offspring's birth six hours before the Hawaiian equivalent of arrival time or almost a day ahead in Japan.

During military service as base surgeon at Kyushu, Japan, Dr. John B. Landress' (W5IBE) first child was born. Through the ham radio station he had established, he was able to communicate regularly with his wife in Orange and could even hear his infant daughter's cry. Dr. Landress, now of Garland, especially remembered the occasion when a wire service learned of his activity and sent a story under the headline, "The cry heard 'round the world."

Dr. C. F. Sherman's (K5BLW) "most satisfying" experience as a ham came in 1954 when he was the radiologist at St. Mary's Hospital in Madison, Wis. A Brazilian resident on the hospital staff developed a serious illness and needed to return home. By considerable maneuvering and with an assist from another amateur in Chicago, Dr. Sherman was able to establish an excellent contact with a young physician amateur in Sao Paulo who by a strange coincidence turned out to be the resident's classmate from medical school. The latter was able to get the resident's parents and sister to come to his home and there ensued what Dr. Sherman described as the "most enthusiastic and emotional exchange of Portuguese conversation mixed with copious tears." During this contact, all arrangements were completed for the resident's return home. Since, the Shermans, now of Temple, have had many notes

A ham's "QSL" confirmation card tells much about the hobbyist. Each card contains the ham's call letters. In this instance, Dr. Grossman's call letters, in phonetic code, are Kilo-Five-Charlie-Yankee (K5CY). From left to right are the logos of the various societies to which he belongs: MARCO, the Quarter Century Wireless Association (for hams with 25 years in amateur radio operations), AMSAT (Radio Amateur Satellite Corporation), DXCC (designates the amateur has contacted 100 countries), and the American Radio Relay League (the earliest amateur radio organization in this country). The cards are sent from one ham to another to confirm contacts and other information such as the strength and readability of transmission. They are also useful for record-keeping purposes.

from the grateful Brazilian.

Dr. Robert P. Thomas, Jr., (W5EPB) of San Antonio, remembered a call MARCO received from a physician on an Indian Reservation. The doctor had a seriously ill patient and needed specific information for a diagnosis. The amateurs on the air at that time were polled; no one had the answer. Someone suggested an Oklahoma professor who was an authority on the condition. In ten minutes, the Oklahoma station had the professor on the phone and patched into the radio network. Thus, the physician had consultation with one of the nation's top experts.

Such occurrences—the usual and the unusual—are taken in stride by the doctor hams. Dr. Frederick S. Geist (WB5FEK), of Dallas, reported a communication with an elderly Floridian who related hearing a message from the *S. S. Carpathia* reporting the receipt of a distress signal from the *Titanic*.

Dr. George N. Aldredge, Jr. (WA5MAK), of Dallas, has had contacts with official Olympic stations in Sapporo, Japan and Munich, Germany on the same day; Cape Canaveral on days of spacecraft launches; and several primary recovery ships at splashdowns. He also had a chance air contact several years ago with a physician originally from the western New York area where the Aldredges have a summer home. The physician knew only one doctor in Dallas—Dr. Aldredge's brother-in-law. Now, the two have almost weekly radio conversations and met in person just last summer.

Such incidents and coincidences are typical of the hams' world. By combining their vocation and avocation, these physicians doubly serve their fellow man. Without a doubt, many lives have been healed or saved by MARCO communications and many friendships have been established. As one doctor said, where else can so much information be controlled for the good of all?

A sky-high goal

Amateur satellite, the newest frontier for hams, will revolutionize amateur radio communication in years to come. Its potential for use in the medical field is just beginning to be explored.

To start at the beginning, the satellite program is sponsored by AMSAT, the Amateur Satellite Corporation based in Washington, D. C. Anyone interested in satellite operations may join although the nonprofit organization is made up primarily of hams. AMSAT is a joint operation, sponsored by hams in the United States, Australia, Canada, Germany, and other countries.

Seven OSCARS—Orbital Satellite Carrying Amateur Radio—have been built by hams in the participating countries. The first five were experimental. The last two, OSCAR 6 and OSCAR 7, remain in orbit today.

The satellites have been launched into orbit as "piggyback" riders on other rockets launched by the National Aeronautics and Space Administration (NASA). NASA launches the OSCARS for AMSAT as a public service to further public education in space science. The radio amateurs using the satellite for experimental purposes keep careful records and telemetry on the satellites which helps NASA study radio waves. Thus, the satellites are used not only for hobby purposes, but also for furthering man's knowledge of space communication.

The two working OSCARS have "repeaters" which provide the capability of receiving signals from hams and retransmitting them with a much greater range. The satellites circle the globe every 115 minutes, and an average "pass" provides about 20 minutes use time. AMSAT members have computerized tracking information to pinpoint the time and longitude of each satellite pass. As in regular amateur radio operations, transmissions may be in Morse Code or voice.

AMSAT has permission from the Federal Communications Commission to send in-

formation from a computer to the satellite. In Dallas, a demonstration is being set up whereby electrocardiogram tracings and other computerized data can be sent to the satellite which on receipt will reconstitute them into an EKG pattern or other original form.

MARCO (Medical Amateur Radio Council) members are also conducting an experiment with Dr. David J. Mishelevich, associate professor and chairman of the Department of Medical Computer Science at The University of Texas Health Science Center at Dallas. They have set up a procedure to send computerized medical data over a phone line into a module which changes the computer readout into radio waves. In turn, a ham sends the radio waves to the satellite for retransmission. On receipt, they are changed from "computer talk" to code or voice. MARCO is trying to help develop portable packages of transmitters and receivers from which to contact the satellite. In disaster areas, for instance, hams could send and receive any type of information, EKGs, disaster plans, and locations of drugs.

There was an incident a few months ago which involved an outbreak of schistosomiasis on the Ivory Coast. Missionary doctors, searching for the new medication for treatment of the condition, contacted the MARCO network. The Center for Disease Control in Atlanta did not have the new drug. Finally, the hams made radio contact with the World Health Organization in Geneva, and the needed medicine was soon on its way to the Ivory Coast. If this type of information were stored in a computer for the immediate availability of hams through the satellites, assistance in emergencies would come even more quickly than is currently possible.

The ability of hams to transmit medical data will be greatly increased when OSCAR 8 is launched in the latter part of 1977. Earth-bound radio operators will be able to maintain contact with the satellite for a couple hours during a normal pass. The future holds much excitement for amateur radio operators. Not even the sky is the limit for this pioneering group!

Medical Newsmakers

A bronze statue created in honor of the late DR. ARRNELL BOELSCHE (WEATHERALL), Galveston pediatrician, has been donated to The University of Texas Medical Branch. Commissioned by friends of the prominent physician, the statute is entitled "Earth Mother" and will eventually be located in the south children's play area of the soon to be completed Child Health Center at UTMB. Dr. Boelsche died Dec 19, 1975 following a lengthy illness which forced her to retire from service in 1974. A full professor of pediatrics at the medical branch, she was most noted for founding the UTMB Child Development and Behavioral Pediatrics Division of the department.

DR. HOWARD E. SKIPPER, president of the Southern Research Institute in Birmingham, Ala, has received the 25th annual Ernst W. Bertner Award for "distinguished contributions to cancer research." The award is presented annually by The University of Texas M. D. Anderson Hospital and Tumor Institute. The award was given in conjunction with the 29th annual Symposium on Fundamental Cancer Research in Houston in March.

DR. PAUL CUTLER, who developed a broad and far-reaching program of continuing medical education in San Antonio, has resigned, for reasons of health, from the post of associate dean for continuing medical education at The University of Texas Health Science Center at San Antonio. He also is on leave from his duties as professor of medicine. "Under Dr. Cutler's leadership," Dr. Stanley Crawford, medical school dean, said, "a strong, imaginative program of continuing medical education has been developed. Thousands of physicians in Texas and beyond have availed themselves of the programs and the credit they provide. It is my hope that Dr. Cutler's health will permit him to return to his duties within the Department of Medicine in the near future. He has several times received student recognition for excellence in teaching this discipline."

The board of Directors of Blue Cross-Blue Shield of Texas has elected WALTER F. HACHMEISTER executive vice president. Other new appointments include BILL R. NEWSOM, senior vice president; BENJAMIN F. McHENRY, vice president Provider Affairs; and RAYMOND L. HUNTER, vice president Data Processing.

Burn specialist DR. JAMES M. LONG is one of five physicians in the nation named to the American Medical Association's Nutrition Advisory Group. This council continually evaluates the role of nutrition in medical practice and serves as consultant to the AMA's Department of Foods and Nutrition. Dr. Long is associate professor of surgery at The University of Texas Medical School at Houston.

Two Houston surgeons have received national recognition for excellence in patient care, teaching, and research. They are DR. JOSEPH N. CORRIERE, professor and director of urology at The University of Texas Medical School at Houston, and DR. EDWARD M. COPELAND, associate professor of surgery at the school. They have been named to the Society of University Surgeons, a group of 250 surgeons in the United States, all younger than 45 years of age. Outstanding contribution to surgical science and education is the main qualification for society membership. Dr. Copeland was honored for his work in nutritional management of cancer patients while Dr. Corriere was honored for his practice of pediatric urology and his research in pathogenesis of urinary tract infections.

DR. MAURICE HOOD, Austin surgeon and member of the Scientific Publication Committee for *Texas Medicine*, has been named

Austin's "Most Worthy Citizen" of 1975. The award, given annually by the Austin Board of Realtors, was announced at a recent meeting of the organization. Dr. Hood is chief of surgery at Brackenridge Hospital and specializes in thoracic and cardiovascular surgery. In addition, Dr. Hood is an honorary fire chief.

DR. ORVILLE CODY THOMAS of Houston has been elected president-elect of the American College of Allergists. Internationally known for his work in the field of allergic diseases, Dr. Thomas has received numerous honors throughout his career including fellowships in French and Mexican Allergy Societies. Currently, he teaches at The University of Texas Graduate School of Biomedical Sciences and Baylor College of Medicine. He is a senior consultant to the McGovern Allergy Clinic as well as a consultant to several major Houston hospitals.

An annual award in memory of the late JAMES E. BEALL II has been established at The Graduate School of BiomedicalSciences, The University of Texas Medical Branch at Galveston. Beall was a doctoral candidate in the graduate school when he died in a cave accident south of Austin in February. This award will be given to a graduate student at the medical branch engaged in research in the field of anatomy or neuroscience. The award will be funded by the James E. Beall II Memorial Fund, administered by the Medical Branch.

Medicine in literature

PERIPHERAL VASCULAR DISEASE, (slide presentation), Medcom, 1972, 100 color slides, 2x2.
Discusses common peripheral arterial and venous disorders and the aspects crucial to their diagnosis and treatment. Accompanying monogram.

RETINAL VASCULAR DISEASE, (slide presentation), Medcom, 1974, 100 color slides, 2x2.
Discusses the classification of retinal vascular disease based upon the pathogenesis of vascular changes and their recognizable ophthalmoscopic appearance. Accompanying monogram.

THROMBOPHLEBITIS AND POSTPHLEBITIC DISEASE, (slide presentation), Medcom, 1973, 100 color slides, 2x2.
Discusses the etiology, development, and treatment of thrombophlebitis and postphlebitic disease. Accompanying monogram.

STROKE REHABILITATION TECHNIQUES, (slide presentation), American Heart Association, Texas Affiliate, Inc, 48 color slides, accompanying cassette.
This program may be used by the general public and professions, as well as stroke patients and their families. The theme is the rehabilitation potential of the stroke patient.

IN THE TMA LIBRARY

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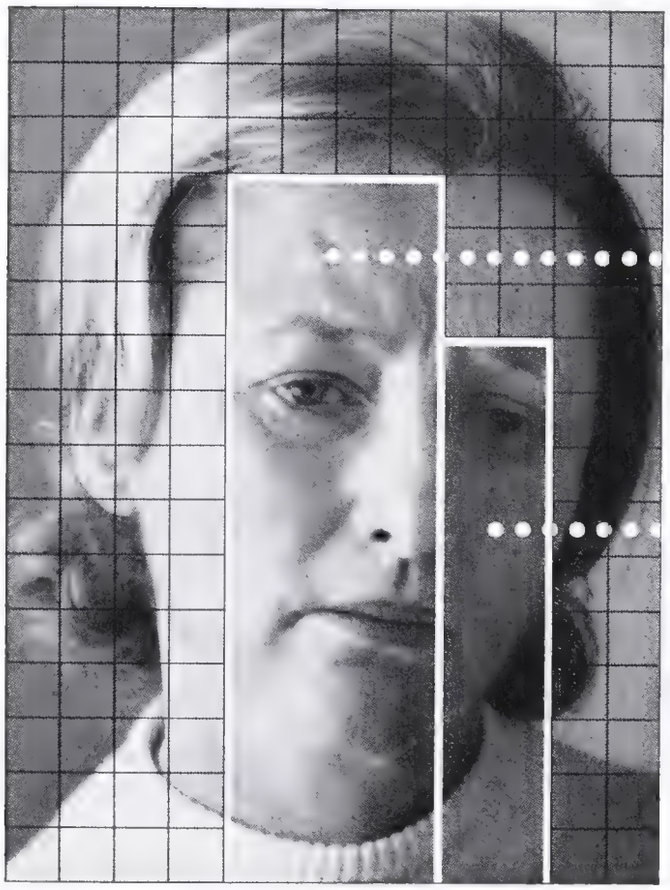
Both often



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequen and/or severity of grand mal seizures m require increased dosage of standard an convulsant medication; abrupt withdraw may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous in gestion of alcohol and other CNS depres sants. Withdrawal symptoms (similar to those with barbiturates and alcohol) hav occurred following abrupt discontinuanc (convulsions, tremor, abdominal and mu cle cramps, vomiting and sweating). Kee addiction-prone individuals under carefu

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xiety with secondary
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therapeutic effect of
is pronounced and
This means that im-
nent is usually apparent
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

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in psychoneurotic
anxiety states
with associated
depressive symptoms

ance because of their predisposi-
habituation and dependence. In
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age, weigh potential benefit
possible hazard.

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on. Usual precautions indicated in
s severely depressed, or with latent
sion, or with suicidal tendencies.

Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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LEGAL PROTECTION: FACTS YOU SHOULD KNOW

Sam V. Stone, Jr.
TMA Office of General Counsel

WRITTEN CONSENT FOR RELEASE OF INFORMATION

It is a fact of modern life that more and more employers and insurers are requring statements of physical condition verified by an examining physician to be filed by applicants for employment or insurance.

This situation often results in placing the physician on the horns of a dilemma. The physician, with a long-term confidential physician-patient relationship, is forced to either verify the physical or mental condition of a patient in a less than candid manner or place his patient in an unfavorable position with his present or potential employer or effectively deny his patient insurance.

While there have been no Texas appellate court opinions dealing directly with disclosure of confidential information with the implied consent of the patient, courts in other jurisdictions have been confronted with this issue.

A New York court found that the physician's reporting of alcoholism to the Air Force without the expressed permission of the patient, who was a civilian employee, did violate the confidential nature of the physician-patient relationship. The court dismissed the suit against the physician, however, on the grounds that the doctor had a "right, if not duty to his government, to make a full disclosure of the fact, superseded by his duty to the patient to remain silent," and that the patient, "having placed the doctor in the position of telling part of the truth, . . . is stopped from preventing his divulging of the remainder." Finally, the New York court held that the plaintiff's discharge was "due essentially to his absences (from the job) and not through the disclosure" of his alcoholism.

This case, and others like it, argue for the advisability of the physician's obtaining approval in writing from the patient before submitting *any* medical statement on behalf of a patient. Of course, the physician should inform the patient that he has a choice between full disclosure and no disclosure at all.

Where the physician is requested to provide information relating to physical or mental condition, or the results of a physical examination, it would be in the physician's interest to have the patient sign an authorization for disclosure of information by the examining physician. While one variation of such a consent form may be as adequate as another, the following suggestion for a form may prove helpful to physicians who are called upon to sign physical evaluation reports at the request of a patient, or at the joint request of a patient and employer, potential employer, insurer, or agency administering a benefit program.

Date: _____

Place: _____

I authorize Dr. _____ to disclose complete information to _____ _____ concerning the results of a physical examination of the undersigned made or to be made on _____, 19____, and to testify, without limitation, as to all findings of said physical examination, in any legal action or judicial proceedings to which I am, or may become, a party; and waive on behalf of myself and any persons who may have an interest in the matter, all provisions of law relating to the disclosure of information acquired through said examination.

Signed: _____

Witness:

_____

_____

MEDICINE AND THE LAW

COURT RULES ON NECESSITY OF EXPERT TESTIMONY

A recent appellate court decision[1] required expert testimony in regard to negligence and declared doctrine of res ipsa loquitur not applicable in a suit alleging negligent administration of anesthetics by a nurse.

Facts

The plaintiff sued the hospital alleging an injury to her sciatic nerve was caused by a nurse's negligence in administering a hypodermic injection. The patient had been admitted to the hospital for a hysterectomy. On the morning of the operation, she was given a sedative orally. Later, she was given a preoperative intramuscular hypodermic injection in her left buttock by a nurse. The plaintiff said she felt a warm, stinging sensation in her leg after the injection. The hysterectomy was then performed without incident. The plaintiff received injections in the left buttock at three additional times that day. Prior to the operation, she had had no difficulty in the use of her left leg. Sometime after the last injection, however, the plaintiff complained to the nurse and the doctor of numbness in her left leg.

The trial court submitted the case to the jury instructing that it could infer negligence by a party, but was not compelled to do so, if: (1) the character of the injury was such that it would ordinarily not have happened in the absence of negligence; and (2) it was more reasonably probable that the injury was due to the negligence of such party than to any other possible cause; and (3) the instrumentality causing the injury was under the management of such party or its agents, servants or employees at the time of the negligence.

The hospital sought reversal of the judgment because: (1) there was no evidence to support the jury's finding of negligence on the part of the hospital's employees; (2) the plaintiff could not, as a matter of law, recover on a theory of the doctrine of res ipsa loquitur because the doctrine does not apply to the facts; and (3) even if the doctrine of res ipsa loquitur was applicable, there was no evidence that the plaintiff sustained an injury to her sciatic nerve as a result of the hypodermic injection. The appellate court reversed the $13,000 judgment and rendered a judgment in favor of the hospital.

Discussion of case

The surgeon who performed the hysterectomy testified that he did not know why the plaintiff suffered pain in her left leg and had not reached any conclusion as to what may have caused the pain. He testified that he had asked a neurosurgeon to examine her left leg to determine the cause of the complaint. The neurosurgeon testified that he examined her on several occasions and found no point of tenderness, no area of bruising or sign of the injection or injury along the sciatic nerve. He further testified that he found nothing to indicate that hypodermic shots had been given at an improper place or in an improper way. He testified that in his own opinion, the plaintiff did not receive an injury due to the intramuscular injections and that he did not know the cause of her injury. Another physician testified that as a result of an electromyogram he found the plaintiff to be suffering from a partial severe left sciatic nerve injury, but that the cause of her condition was unknown.

The court stated that according to the testimony of the various doctors there were at least eight possible causes of the plaintiff's nerve injury. The court further said that none of the testifying physicians could say that the intramuscular injections were improperly administered, nor that there was any direct evidence that the hypodermic needle used by the nurse or nurses ever struck or came in contact

with the sciatic nerve. None of the physicians were able to determine the cause of the injury to the nerve.

The court stated that persons undertaking to administer anesthetics in the course of medical or dental treatment are not insurers against harm or guarantors of a favorable result, but are required only to exercise ordinary or reasonable care and skill under the circumstances. When a case concerns a highly specialized art, the court and the jury must depend upon expert evidence. Without the aid of expert testimony in this case, the court felt a jury could not, without resorting to conjecture and surmise, determine that the defendant's employees failed to exercise the skill and care exercised by ordinary skillful, careful, and prudent nurses acting under the same or similar circumstances.

The court stated that in view of the fact that there was no testimony whatsoever in this regard, expert or otherwise, suggesting that the nurse or nurses failed to exercise ordinary skill, the judgment could not be sustained on the basis of the finding of negligence.

The court also ruled that there was not sufficient evidence to justify the submission of the case to the jury on the doctrine of res ipsa loquitur. The court stated that the doctrine came from the process of drawing logical conclusions from circumstantial evidence. The court further said that its purpose was to permit one who suffers injury from something under the control of another, which ordinarily would not cause injury except for the other's negligence, to present his grievance to the court or jury on the basis of the reasonable inferences to be drawn from such facts, even though he may be unable to present direct evidence of the other's negligence.

The court stated that a review of the cases, pro and con, regarding the application of the doctrine in malpractice actions demonstrates that the doctrine is applicable only where it is a matter of common knowledge among laymen or medical men, or both, that the injury would not have occurred without negligence. The court stated that very few laymen have had experience in administering anesthetics by use of hypodermic needle. Consequently, insofar as laymen are concerned, the conclusion in this case could only rest upon expert testimony. In addition, even if the expert testimony could be construed as giving rise to the inference of negligence, there appears to be no probative evidence established that such negligence was the proximate cause of the injury.

The court stated that res ipsa loquitur does not infer causation. Rather it presupposes a known cause or at least a cause established by evidence in reasonable probability. The nature of this case, according to the court, was such that a layman could not determine the causal relationship between the event and the appellee's condition.

Conclusion

Once again, an appellate court has confirmed that medical and nurse practitioners are not insurers against harm nor guarantors of a favorable result. They are only required to exercise ordinary reasonable care and skill. When a case concerns the highly specialized art of administering injections of anesthetics, the courts and jury must depend on expert evident. Without the aid of such expert testimony a jury cannot, without resorting to conjecture and surmise, determine that the defendants failed to exercise ordinary skill. The doctrine of res ipsa loquitur is only applicable in the medical malpractice action which concerns a matter of common knowledge among laymen or medical men or both in which injury would not have occurred without the negligence. Further, the doctrine does not infer causation; rather, it presupposes a known cause or at least a cause established by evidence and reasonable probability and cannot be invoked in any circumstance without negating the possibility that the injury may have occurred from other causes.

TMA Office of General Counsel
Ace Pickens

[1]*Southwest Texas Methodist Hospital vs Mary Louise Mills* No. 901—Texas Court of Civil Appeals, 12th District.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

ArrNell Boelsche (Weatherall)
Texas City, 1924-1975

R. G. Bruce
Dallas, 1909-1976

D. E. Cantrell
Odessa, 1905-1976

T. C. Cole, Sr.
Huntsville, 1906-1975

Armando Elizondo
San Antonio, 1924-1976

W. W. Frye
Lubbock, 1903-1975

J. R. Harris, Jr.
Bronte, 1920-1976

A. W. Hinchman
Brady, 1892-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. Boelsche

Dr. Bruce

Dr. Cantrell

Dr. ArrNell Boelsche (Weatherall)

Dr. ArrNell Boelsche (Weatherall), 51, died Dec 19, 1975, at her home in Texas City. She was a pediatrician.

Dr. Boelsche received her BA degree from Rice University, Houston, (1944), and her MD degree from The University of Texas Medical Branch, Galveston (1949). Her internship was at the State of Wisconsin General Hospital, Madison, and her residency was at The University of Texas Children's Hospital, Galveston. She also studied at Children's Hospital Medical Center, Boston.

Dr. Boelsche joined the faculty of UT Medical Branch as an instructor in pediatrics in 1953, and became a professor in 1971. She retired in 1974 due to ill health.

During her tenure on the faculty of UT Medical Branch, Dr. Boelsche published 20 scientific communications. She also lectured and served on numerous local, state and national committees relating to the health and welfare of children.

Her professional memberships included the American Academy of Pediatrics, Texas Pediatric Society, American Medical Association and Galveston County Medical Society.

Surviving the physician are her husband, Dr. J. T. Weatherall, Texas City; brother, Allen Lesiker, and sister Idell Boelsche, Houston; and several nieces and nephews.

Dr. R. G. Bruce

Dr. Robert Grady Bruce, Dallas ophthalmologist and otolaryngologist, died Jan 17, 1976, at the age of 66.

Dr. Bruce, a native of Commerce, Tex, had practiced in Dallas since 1958. He previously had practiced in Mineral Wells, Sulphur Springs, and Greenville.

He was a 1932 graduate of East Texas State Teachers College. He completed his MD degree at The University of Texas Medical Branch, Galveston, in 1937. Dr. Bruce's internship was at City-County Hospital, Fort Worth, and his residency was at New York Polyclinic. He also did postgraduate work in Philadelphia.

Dr. Bruce's professional memberships included the Dallas County Medical Society, International College of Surgeons, and American Medical Association.

He also was a Mason and a Shriner, and an active member of the Easton Road Church of Christ, Dallas.

He served in the US Army during World War II, and was stationed at several locations in the US and England.

Surviving Dr. Bruce are his wife, Patricia Reagan Bruce; four daughters, Mrs. Albert J. Elliott, Rita Lynn Bruce and Lacy La Nell Bruce, all of Dallas, and Mrs. James C. Martin of San Antonio; two sons, Dr. Robert Lance Bruce, of New York and Robert Grady Bruce II, of Dallas; and three sisters, Mrs. Nell Tittle and Mrs. Lillie Bryant, both of Sulphur Springs, and Mrs. Ludie Alexander of Cumby.

Dr. D. E. Cantrell

Dr. David Emmerson Cantrell, 70, died Feb 10, 1976, in Odessa.

Dr. Cantrell was a native of Oklahoma. He moved to Odessa in 1956, and practiced there until the time of his death.

He was a graduate of Oklahoma University (1932) and Oklahoma University School of Medicine. He practiced in Healdton, Okla, for 21 years.

Dr. Cantrell was a veteran of World War II, having served in the US Army.

His professional memberships included the Andrews-Ector County Medical Society and the American Medical Association.

Surviving Dr. Cantrell are his wife, Faye Buckmaster Cantrell, Odessa; two stepsons, Kenneth Brooks, Anchorage, Alaska, and James Brooks, Abilene; a brother, Reynolds Cantrell, Healdton, Okla; a sister, Mrs. Richard Massed, Lawton, Okla; and five grandchildren.

Dr. T. C. Cole, Sr.

Huntsville family practitioner Dr. Thomas Carroll Cole, Sr., died Dec 25, 1975, at Diagnostic Center Hospital, Houston.
At the time of his death, Dr. Cole, 69, was in private practice with his son, Dr. T. C. Cole, Jr.
The doctor had been a resident of Huntsville since 1934. He was a native of Franklin, Tex. He was graduated from The University of Texas Medical Branch in 1931, and interned in Cleveland.
In 1934, Dr. Cole joined the medical staff of the Texas Department of Corrections. At the outbreak of World War II, he joined the US Navy, and achieved the rank of lieutenant commander. He returned to Huntsville following his discharge.
Dr. Cole was a past president of the Walker-Madison-Trinity County Medical Society. He also was a member of the American Medical Association.
Surviving are his wife, Margaret Thomason Cole, and son, Dr. T. C. Cole, Jr., Huntsville; daughter, Jan Cole, Houston; four brothers and a sister.

Dr. Armando Elizondo

Dr. Armando Elizondo, San Antonio, died Jan 6, 1976.
Dr. Elizondo, 51, was a family physician. He had practiced in San Antonio from 1953 to 1958 and from 1961 until the time of his death.
Dr. Elizondo obtained his academic and medical education in his native city, Monterrey, Nuevo Leon, Mexico. He practiced in Mexico, as well as Mission and Harlingen prior to moving to San Antonio.
The physician's professional memberships included Bexar County Medical Society and the American Medical Association.
Surviving Dr. Elizondo are his wife, Emma Garza Elizondo, San Antonio; and daughters, Emma Margot Elizondo, Dallas, and Holda Alice Elizondo, San Antonio.

Dr. Cole

Dr. Elizondo

Dr. W. W. Frye

Dr. William Wesley Frye, University Professor of Texas Tech University School of Medicine, died Dec 2, 1975. He was 72 years of age. Cause of death was a heart attack.
Dr. Frye was a former dean of Texas Tech University School of Medicine. He was given the title University Professor, the highest academic rank available, at the time he retired as dean (1974).
Dr. Frye was born in North English, Iowa. He held the BS, MS, PhD, and MD degrees, along with several honorary degrees. His undergraduate education was obtained at Iowa Wesleyan College, and his medical education at Vanderbilt University School of Medicine.
Dr. Frye's medical experience, honors and awards were international. He had been a member of the Cholera Commission to China, Office of the Surgeon General, US Army (1945); deputy director of Enteric Diseases Commission, Armed Forces Epidemiological Board, Korea (1951); and director of the Tropical Medicine Fellowships Program (NIH), Latin America. He also was the recipient of a fellowship to visit hospitals, medical schools, and research institutions to study teaching and research tropical medicine and parasitology in Europe, Africa, the Near East, In-

Dr. Frye

Dr. Harris

Dr. Hinchman

dia, Australia, the Philippines, Japan and Hawaii.

Other appointments included special consultant, Texas Tech University School of Medicine (1970); Chancellor Emeritus, Louisiana State University and Medical Center (1969); Professor Emeritus of Tropical Medicine, Louisiana State University Medical Center (1969); and President, United Health Foundations, Inc, New York (1966).

Additionally, Dr. Frye held memberships in academic honor societies, professional scientific societies, and volunteer organizations too numerous to list.

Surviving Dr. Frye are his son, William W. Frye, Jr., Warri, Nigeria; four daughters, Mrs. Robert J. Bisso, Memphis; Mrs. Cornelius W. Hinyip, Mrs. Donald Drury, and Mrs. Vincent Wynne, all of New Orleans; 18 grandchildren; and one great-grandchild.

Dr. J. R. Harris, Jr.

Dr. John Roy Harris, Jr., died Jan 18, 1976, at the age of 55. He had resided in Bronte, Tex, since 1947.

The family practitioner was a native of Oklahoma and attended Oklahoma Baptist University, obtaining the Bachelor of Science degree in 1940. In 1944, he completed his medical studies at Baylor College of Medicine. Dr. Harris served his internship at Robert B. Green Memorial Hospital, San Antonio. He also did postgraduate work in anesthesiology and surgery.

Dr. Harris achieved the rank of captain during 17 months' service with the US Army. He was a veteran of World War II, having served in the Pacific with the 349th Mobile Surgical team.

The doctor's professional memberships included the Tom Green Eight County Medical Society, Southern Medical Association, Texas Geriatric Society (charter member), and American Medical Association.

Surviving are his daughter, Ann Harris, Austin; son, Rex Harris, San Angelo; and parents, Mr. and Mrs. John Roy Harris, Sr., Lawton, Okla.

Dr. A. W. Hinchman

Dr. Alda Warren Hinchman, 83-year-old physician and surgeon, Brady, died Feb 8, 1976, after a long illness.

Dr. Hinchman became an honorary member of the Texas Medical Association in 1973.

Dr. Hinchman, a native of West Branch, Iowa, moved to Brady in 1931. He was a graduate of the Des Moines (Iowa) Still College (1915) and the Kansas City University of Physicians and Surgeons (1930). His education was interrupted by service as a lieutenant in the cavalry during World War I.

The general practitioner was active in church and civic work during his 45 years in Brady. He was a Mason (past Worshipful Master) and Shriner, and a past commander of the Brady American Legion Post.

A life member of the National Rifle Association of America, Dr. Hinchman was an avid hunter and fisherman. He was a collector of guns and was a gunsmith. His other hobbies included photography, bridge, and playing the piano and violin. He also was a choir member at the First United Methodist Church, Brady.

The doctor was a former president (1947) and secretary (1953) of the Kimble-Mason-Menard-McCullough County Medical Society and a member of the American Medical Association.

Surviving Dr. Hinchman are his wife, Nautie Day Hinchman, Brady; daughter, Mrs. Anita Durbin, Sunnymead, Calif; son, Warren Hinchman, Houston; step-daughter, Mrs. Cecil Calvert, Dallas; step-son, Buddy Seaton, Brady; ten grandchildren and seven great-grandchildren.

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This meeting features new and/or expanded methods of teaching both inside and outside the classroom. You can spend every day participating in several types of learning situations. For example, there will be audio and tape demonstrations; computer-assisted instruction; pre- and post-tests for self-evaluation. In addition, there will be "hands on" manikin practice and many opportunities to participate in small group discussions or to consult with course instructors and fellow physicians. Naturally, we're repeating a popular feature—medical motion pictures. This year, there will be 30—all scheduled for your convenience.

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To help you fulfill C.M.E. requirements for the AMA Physician's Recognition Award and your state or specialty society, this Annual Meeting offers many opportunities--113 in fact—to earn Category 1 credits. You'll have your choice of 57 postgraduate courses and the majority of 47 scientific sessions are classed for Category 1. Hour-for-hour credit will also be given at the Live Teaching Clinic, Pulmonary Function, Dialogue, and at the 8 telecourses offered in the Convention Center and the Dallas hotels. (The AMA will provide you with a certificate of attendance; make sure you report your credits to your state or specialty society.)

Other Highlights

A majority of physicians regard the exhibit area as one of the most important features of AMA meetings. If you happen to be one who values this one-to-one peer communication with exhibitors, Dallas won't disappoint you. There will be 300 exhibits, evenly divided between scientific and industrial. Last, but not least, is the 18th National Conference on the Medical Aspects of Sports. Every year it gets bigger and better—you won't want to miss this year's Conference.

How to fill post-Convention hours, if you have an ounce of energy left

If you've never been to Dallas, you're in for some surprises. Even though you'll see some Texas-style hats and hear quite a few "Y'all's," Dallas is neither typically Western nor typically Southern. It is simply Dallas—a city of fashion, style, flair, fun, and even, grace.

The AMA Auxiliary is planning many events during the Convention. No need to list them here for you can receive the details by contacting the AMA by phone or address as shown below.

Dallas offers a potpourri of entertainment to suit every taste and lifestyle. For animal lovers, there's a Lion Country Safari and a great zoo. If you've never seen a rodeo, don't miss the Mesquite Championship Rodeo. It will give you plenty to talk about! There's a fantastic theatre center and numerous museums for culture devotees. For those who like it swinging and festive, there are clubs, cabarets, and corner pubs. And shopping! Dallas boasts you can find everything from his and her airplanes to unique $5 gifts. If you've ever seen the Neiman-Marcus catalog, you know that's not an idle boast. Oh, one word about the restaurants: don't come expecting to diet. Dining out in Dallas is an adventure for both the novice and gourmet!

For further information about the courses, sessions, hotel-motel reservations, and AMA Auxiliary activities, please write or phone to:

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Physicians Wanted

A BETTER PLACE TO PRACTICE MEDICINE. Enjoy practicing medicine in a warm climate, and with the friendly people in Wichita Falls, Texas. Our brand new 55,000 square foot clinic building has new offices and examining rooms ready for specialists in internal medicine, family practice, and diagnostic radiology. We are a multi-specialty group located in a city of 100,000 people in North Central Texas—close to everything—but away from the big city problems. Call collect Dr. Preston McCall at 817-766-3551, at 501 Midwestern Parkway, East, Wichita Falls, Texas 76302.

FP OR IM TO JOIN THREE MAN GROUP. Investigate facilities, compatibility, economics and environment personally with wife and family. Community Health Center, P.O. Box 672, Trinity, Texas. 713-594-3595 for Barnes, Colwell or Cook.

WANTED ORTHOPEDIC SURGEON TO JOIN multispecialty clinic with facilities for doing all types of surgery in new hospital as well as office in new clinic building. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start for salary of $45,000 per year negotiable. City has population of 6,000 with trade area of 20,000 to 25,000. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

LOCUM TENENS WANTED: Doctor interested in GP work with OB. To cover one doctor on weekly, monthly or any time of the year basis. Financial arrangement negotiable. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PATHOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: RADIOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL INTERNIST WANTED: Board certified or eligible to join expanding successful group. Busy hospital and office practice. Houston environs. Excellent salary and fringe benefits. Contact Doctors Clinic, 1501 Broadway, Galveston, Texas; attention Robert Walsh, Administrator.

WANTED: GP OR PEDI. Potentially, lucrative practice, suburban area of about 20,000. No Pedi in area. Willing to negotiate. Paul A. Grandy, M.D., 10805 N. Lamar Blvd., Austin, Texas 78753; 512-837-2640.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

TEXAS PRACTICES. Have requests for associates from Texas physicians and some solo and group openings. Small, medium and large size cities. Excellent economic climate produces rapid practice growth. Please send C.V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Kingwood, Texas 77339.

DOCTOR WANTED FOR GENERAL PRACTICE in Poteet, Texas. 28 miles south of San Antonio, Texas. New furnished clinic for two doctors. Free rent for a limited time. Contact A. A. Hollub, 512-742-3315.

STUDENT HEALTH PHYSICIANS. Two physicians needed to help provide primary medical care for student population of 22,000. Stimulating environment, Medical School Ambulatory Clinic. Salary above $30,000; position includes clinical appointment in medical school. Call or write Reagan H. Gibbs, M.D., Texas Tech University Health Sciences Centers, Box 4049, Lubbock, Texas 79409; phone 806-742-3327.

PSYCHIATRY RESIDENCY AVAILABLE at Texas Research Institute of Mental Sciences, Houston, in the Texas Medical Center. Applicant must have internship or equivalent year of graduate medical education. First year stipend without service obligation, $15,000; or optional $19,000, with State career obligations. TRIMS features comprehensive programs in all facets of service, research, and training. Affiliated with local medical schools and other institutions. For information contact Ed Johnstone, M.D., Texas Research Institute of Mental Sciences, 1300 Moursund, Houston, Texas 77030.

MID-GULF COAST: INTERNIST with cardiology sub-specialty; family practitioner needed to practice in very progressive medium sized community on Gulf Coast. Excellent schools, churches with a friendly area population. New hospital with 60 beds under construction now. Excellent sports and recreation near by with hunting and salt and fresh water fishing. Plan guaranteed income for two years to acceptable people. Call 713-543-3367 or write P.O. Box 405, El Campo, Texas 77437.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OCCUPATIONAL, AEROSPACE, PREVENTIVE MEDICINE. Board certified or eligible physician in occupational, preventive or aviation medicine for primary care practice in large, 60-man clinic and satellites with opportunity to participate in executive health, family practice, occupational medicine and prepaid health care program. Teaching and research opportunities in adjacent Texas Medical Center. Salary negotiable. (No dual compensation involved for retired.) Write or call Dr. M. B. Johnston, Kelsey-Seybold Clinic, 6624 Fannin Street, Houston, Texas 77030; telephone 713-797-1551.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER NEEDED for solo practice. 30 bed general hospital, Medicare approved. Quiet, rural town. Free office space provided. One other physician on active staff. Excellent public school system. Good hunting and fishing. Friendly people. Contact Administrator, Throckmorton County Memorial Hospital, P.O. Box 487, Throckmorton, Texas 76083; 817-849-2151 or 817-345-3206.

DALLAS—INTERNAL MEDICINE OR FAMILY PRACTICE. Ideal opportunity. Doctor leaving practice, July 1976. In medical building of 25 doctors, no internist, only one in family practice. This is very busy practice, gross $200,000 last year. I will call you in confidence. Write to Ad-631, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EMERGENCY PHYSICIAN: El Paso. Full time in new 290 bed hospital with developing ED. Malpractice covered. $45,000/year minimum. D. Moran, M.D., Sierra Medical Center, 1625 Medical Center Drive, El Paso, Texas 79902; 915-544-0900.

WANTED: PEDIATRICIAN to join a multispecialty group with two board pediatricians. Guaranteed salary $30,000 plus many fringe benefits. Contact F. L. Phillips, M.D., Glen Valley Clinic, 7630 Bellfort, Houston, Texas 77061.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

OPHTHALMOLOGIST WANTED in South Central Texas to take over equipped office of retiring ophthalmologist; buy only the sharp instruments, pay reasonable rent on building and other equipment. Practice grosses $62,000 without surgery. Nice semi-retirement opportunity. Available March first. Please reply to Ad-608, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EMERGENCY DEPARTMENT Director and associate physicians needed for 500 bed Dallas hospital. "Fee-for-service" with paid malpractice and benefits. Contact Drs. Cooper and Spurgeon, toll free 1-800-325-3982 or send resume to Ad-632, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

TWO FAMILY PHYSICIANS, one preferably FP/surgeon, needed. 18 year old established practice open. Physician has retired leaving tremendous opportunity for physicians seeking practice in a small community with excellent schools, community spirit, climate and stable population. Near I-35, 15 miles from Waco and three large lakes. Fully equipped clinic. New 49 bed accredited hospital with excellent staff. Call collect, person to person: Gladys B. Wilson, Administrator, West Community Hospital, West, Texas; 817-826-5381, or Alvin R. Payne, President, Board of Directors, 817-826-5321.

OPPORTUNITY: City of 3,421; area of 16,800. Opportunity for IM to join group of two FPs. Office space available in clinic with FPs. Salary to start and partnership in year. Ophthalmology, ENT, and two FPs now in community. One hospital, 38 beds, open staff. 60 miles from Houston, 90 miles from Austin, 125 miles from San Antonio. County seat, good schools. Community income from oil and gravel industries, ranching and construction industries. Contact: C. I. Shult, M.D. or R. Cecil Marburger, M.D., Medical and Surgical Clinic, 1220 Bowie, Columbus, Texas 78934. Telephone: 713-732-2318.

PHYSICIAN TRAINED INTERNAL MEDICINE, cardiology, board certified or eligible, to share established practice and work into full partnership. Fine opportunity for well trained individual. Partnership available in year, work load can be adjusted to meet specific desires and motivation. Send curriculum vitae. Ad-634, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER OR INTERNIST WANTED with Texas license for Student Health Physician. Forty hour week, Monday through Friday, no call or weekend duty. Annual salary of $30,000 with fringe benefits and a pleasant association with two other physicians to care for students. Please contact Mary E. Smith, M.D., Director, North Texas State University Student Health Center, P.O. Box 5158, Denton, Texas 76203. Telephone 817-788-2331. We are an equal opportunity/affirmative action employer.

TEXAS—NORTHEAST: EM Department physicians. Immediate opening available in established ACEP oriented group. Positions in four fine communities in Northeast Texas (population from 20K to 75K). All have the convenience of a large urban center nearby, yet offer a more stable, simple and serene lifestyle with many recreational and cultural opportunities. Prefer career oriented ED MD's. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes, including malpractice insurance. Write Emergency Medical Consultants, 3600 Gaston Avenue, Dallas, Texas 75246 or call 214-823-6850.

TEXAS: Full time emergency physicians wanted by ER group. Flexible hours. Competitive remuneration. Contact: S. Powers, M.D., 2410 S. Voss, Suite G116, Houston, Texas 77057; 713-783-9299. Ref. Ad. A.

NEEDED URGENTLY, semi-retired physician with Texas license to work on board of Mobile Van to screen for health cards in city of Houston. Pay $2500 per month, 8 hours per day. No weekends or night duties. Please contact Dr. Jamil T. Azzam, 713-444-8906 and after 7 p.m. 713-273-1017.

INTERNIST: 17-physician group in city of 70,000. Good starting salary, liberal fringe benefits including retirement plan. Associate status in one year. New hospital and clinic building under way. Contact John Murphy, Clinic Hospital Medical Associates, 224 West Beauregard, San Angelo, Texas 76901. 915-655-5761.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

WANTED: FAMILY PRACTITIONER AND INTERNIST to join established multispecialty clinic in downtown San Antonio. Laboratory and x-ray facilities on site. Compensation negotiable. Write or call collect L. B. Swayze, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

PHYSICIANS WANTED: DERMATOLOGIST, OTOLARYNGOLOGIST, to join growing multispecialty clinic in beautiful new building, adjoining medical center. Excellent financial arrangements. All the benefits that only a group practice can provide. Contact: Sheldon W. Joseph, M.D., Medical Director, MacGregor Medical Clinic Associates, 8100 Greenbriar, Houston, Texas 77054. 713-797-1466.

IMMEDIATE NEED OF GP for 4-member clinic. Major hospitals. $2,500 monthly/vs. percentage. Early association. 5th member residency bound. Liberal vacation/study. Call one weekend monthly, one night weekly. Fort Worth, 1-817-534-6616.

ESTABLISHED 11-MAN MULTI-SPECIALTY GROUP has immediate openings for surgeon, primary care internist, or family practitioner. First year salaried, then full participation. Located in North Central Texas, population approximately 55,000. Excellent recreational facilities. Contact George F. Erzinger, Clinic Manager, P.O. Box 1338, Sherman, Texas 75090.

ESTABLISHED INTERNIST PRACTICE AVAILABLE IN BROWNSVILLE, TEXAS. Border/sea. Modern, fully equipped office: EKG, x-ray, 2 exam rooms; nurse's office, two rest rooms, efficient clerical section, attractive waiting area, private consultation room. Ample parking. Excellent location. Mrs. George Freeman, 645 Villa Maria Blvd., Brownsville, Texas 78520.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 6405 Richmond, Suite 303, Houston, Texas 77057.

FAMILY PRACTITIONER TO JOIN a group of established FPs. One member is leaving as of June 1, 1976. His practice is totally available. Financial relationship open for discussion. Open staff hospitals. Excellent community with all available recreation. Three well established FPs needing fourth man. Contact Robert E. Chapman, M.D., 5808 East Belknap, Fort Worth, Texas 76117.

Situations Wanted

RADIOLOGIST 46, university trained, certified. Two years NIH fellowships in cardiovascular radiology and one year fellowship in neuroradiology. Publications. Presently head of cardiovascular radiology section with an active echocardiographic section in a major north central teaching center. Seek challenging position in private practice, or teaching position. Ad-614, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MARRIED, AGE 37 YEARS. Immigrant visa. Finished three years of residency and one year clinical fellowship in anesthesiology. Have Texas and Georgia medical licenses. Would like to settle in Texas. Board eligible. Available immediately. Call 216-229-2200 ext. 2650 or write Avutu R. Reddy, M.D., Cleveland Clinic, Cleveland, Ohio 44106.

BOARD CERTIFIED, DYNAMIC, ECLECTIC, bi-lingual, 35 year old psychiatrist with ample experience in individual psychotherapy and institutional psychiatry and with excellent recommendations wishes to join partnership in the area of San Antonio, Texas. Please reply to Ad-616, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGERY AND PEDIATRIC SURGERY. FMG, ECFMG and surgical board eligible. 34 years old, married. Want associate, group or guaranteed. Prefer close to middle or big size city. Please reply to Ad-620, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXPERIENCED BOARD CERTIFIED GENERAL SURGEON and wife board certified OB/GYN and certified cytologist looking for a permanent position in medium size or large city in Texas. Please reply to Ad-610, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED DIAGNOSTIC RADIOLOGIST with extensive experience in neuro-radiology, vascular procedures and special procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join hospital based group with private office. Available after three months time. Please reply to Ad-622, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BLUE-CHIP PHYSICIAN ASSISTANT looking for position in Austin or Hill Country area. Two years experience, including surgery. Baylor graduate 1973, Houston, Texas. Please reply to Ad-627, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST—45 year old, board certified AP-CP. Also board certified in OB/GYN. Experienced in clinical medicine as well as laboratory medicine and laboratory management. Desires hospital laboratory directorship to provide a first class service to a progressive medical staff. Please reply to Ad-630, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED OBSTETRICIAN AND GYNECOLOGIST with vast experience in all operative procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join group with private office. Available after three months time. Please reply to Ad-623, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: 36, male. Board certified, both AP and CP, also with Ph.D. in pathology. Well trained and experienced in hospital laboratory practice. Seeking position as laboratory director or full partnership. All locations, prefer coastal metropolitan area. Available 2-3 months notice. Please reply to Ad-633, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION: 36, board eligible, university trained neurosurgeon. Two years practice experience, microneurosurgery oriented. Licensed in Texas. Seek association, partner, group or solo practice. Available anytime. Please reply to Ad-635, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OB/GYN, 30, Flex licensed, American graduate. Married, military completed, completing residency in June, 1977. Desires association with two or more OB/GYN or salaried position. Willing to work with Spanish patients. Please reply to Ad-637, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PERIPHERAL VASCULAR GENERAL SURGEON, PEDIATRICIAN: Husband, 31, board certified, presently a fellow in vascular surgery under Michael E. DeBakey, M.D., ending June 30, 1976. Wife, 27, board eligible, ending residency June 30, 1976, at Baylor, Houston. Desire stimulating practice, open as to type. Available July 1, 1976. Please reply to Ad-638, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: Diplomate of the College of American Pathologists, desires position as director or associate. Prefer mid or eastern Texas (either north or south). Have been director of a hospital and private laboratory and ASCP school of medical technology for past 11 years. Am married with children. Available immediately. Phone 405-721-3618.

INTERNIST: 30, ABIM, university trained. Texas license. Desire locum tenens. Army discharge February 1977. Begin civilian fellowship July 1977. Would like two or three months association with practicing internist or group in San Antonio beginning March 1977. Please reply to Ad-639, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18287, Dallas, Texas 75218.

MUST SUBLEASE — Medical or dental office, 1,100 sq. ft., $450 monthly. Carpeting, drapes, utilities and cleaning included. Original lease expires August 1976. Contact Dr. Robert Birchall, 1415 Third Street, Suite 502, Corpus Christi, Texas 78404. 512-882-9278 or 412-882-8226.

OPTICAL COMPANY FOR SALE situated in metropolitan area with gross sales in excess of $225,000, incorporated and enjoys established clientele, glasses and contact lenses dispensed from several offices, personnel including management available to continue operations. Principals only please reply to Ad-597 *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DOCTORS SUITES, approximately 1,000 square feet at 45c square foot including all bills and janitor. One block to hospital. Heights Med Arts Center, 411 West 21st Street, Houston, Texas. Call Irving Richie, 781-3138 or 862-2562. Write to 2100 Fountain View #29, Houston, Texas 77027.

NEW OFFICE SPACE for lease in northwest San Antonio. One block from Loop 410 and Interstate 10. Will finish out to suit tenant. Contact Mossrock Professional Building, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

FOR LEASE OR SALE—VERY MODERN CLINIC, due to owner's death. Furnished, many extras. Latest equipment including lab, x-ray, EKG. 3750 square feet. Grossed $200,000-$300,000 annually. Completely staffed with lab, x-ray, office personnel. Reasonable terms. Ample (5) open staff hospital facilities. One block from Texas Tech University and Medical School. Records of 2400 families on file. Contact Clifford E. Payne, Jr., 4601 West 17th Street, Lubbock, Texas 79416; 806-799-6789.

FOR SALE OR TAKE OVER LEASE—Buy payment. NCR Model 395 Electronic Accounting Machine. 100 memory banks. Must dispose of due to partnership dissolution. John C. Koch, M.D., P.O. Box 388, Lufkin, Texas 75901.

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AGING PATIENTS NEED OUR CARE

"Doctor, are you really interested in caring for aging patients?"

Too often, we hear that physicians do not pay enough attention to care of people in nursing homes. Whether the charge is true or not, the time has come when we must consider our situation.

Almost 22 million people in the US are over 65 years old, and by 2000 AD, one-fourth of our citizens could be over age 62. This large segment of the population will need the specific interest of all physicians, be they practitioners, teachers, or researchers. One problem, then, is to increase physicians' interest in the care of the aging patient.

Of course it is gratifying to care for acutely ill patients; usually the problem comes to a rapid conclusion and the patient gets well and goes about his business. If the aging patient's problems are less acute and less easily resolved, they produce no less anxiety and discomfort. Our interest and our care are needed. Likewise, we should encourage medical students and young physicians to develop interest and skill in working with geriatric patients.

Frequently, we find that physicians do not realize that they are subject to certain rules and regulations in caring for patients in nursing homes; likewise, many are unaware of the rules and regulations under which the nursing home itself must operate. It is important that physicians become familiar with these regulations and that they increase their interest and participation in the care of nursing home patients.

Texas has some of the finest nursing homes in the US, and much credit for this goes to the Department of Public Welfare and the Department of Health Resources, along with the Texas Nursing Home Association, the Association of Homes for the Aging, and the American Health Care Association.

Each county medical society also has a committee on nursing homes, the duty of which is to check nursing homes in the locale and to stimulate more interest among physicians in caring for aging patients. It would be helpful for these committees to visit with nursing home administrators, and with representatives from the health resources and public welfare departments, to learn wherein the problems lie and what physicians can do to help solve them.

Federal law now requires that all skilled nursing facilities have a physician medical director. This is an important position, and requires the part-time or full-time service of a physician, depending on the size of the facility.

Each one of us can, in some way, act to improve the care of people in nursing homes. They need our attention.

Carl F. Page, MD, Lubbock, Chairman, TMA Committee on Aging and Nursing Homes.

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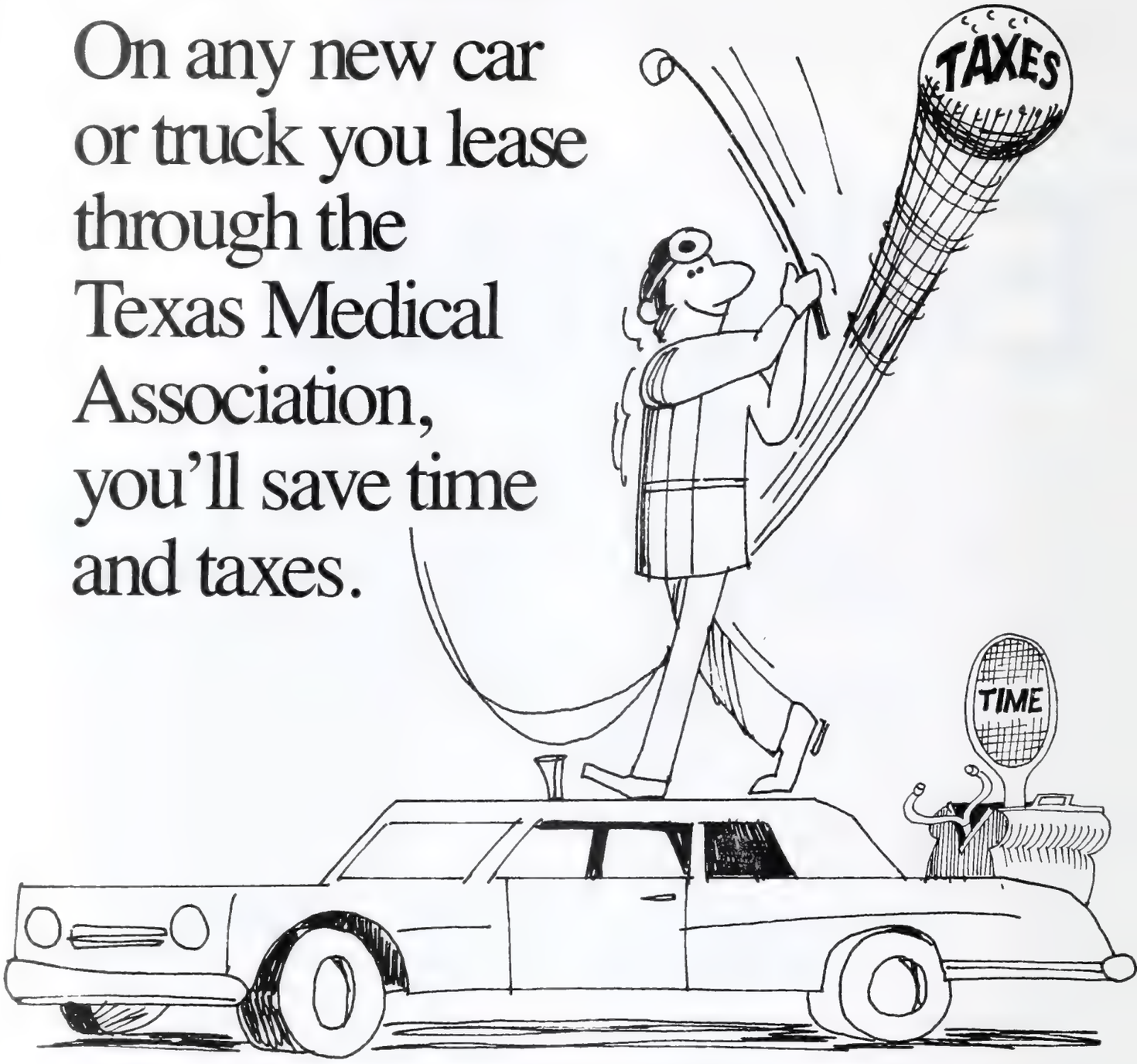

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ON THE COVER

Texas Medicine doesn't go back 200 years, but in the spirit of the Bicentennial we bring you a glimpse of an urban physician's office around the turn of the century, and some examples of medical news from earlier days (pages 99-102). For helpful background information about today's news—professional liability insurance—turn to pages 73-91 for results of TMA's survey on medical professional liability in Texas.

NEXT MONTH

Comprehensive review articles will be from Baylor College of Medicine, and will be on facts and fallacies about skin grafting, genitourinary trauma, and evaluating dizziness. Other articles will be on medical consultation, mycetoma, and postoperative radionuclide scans.

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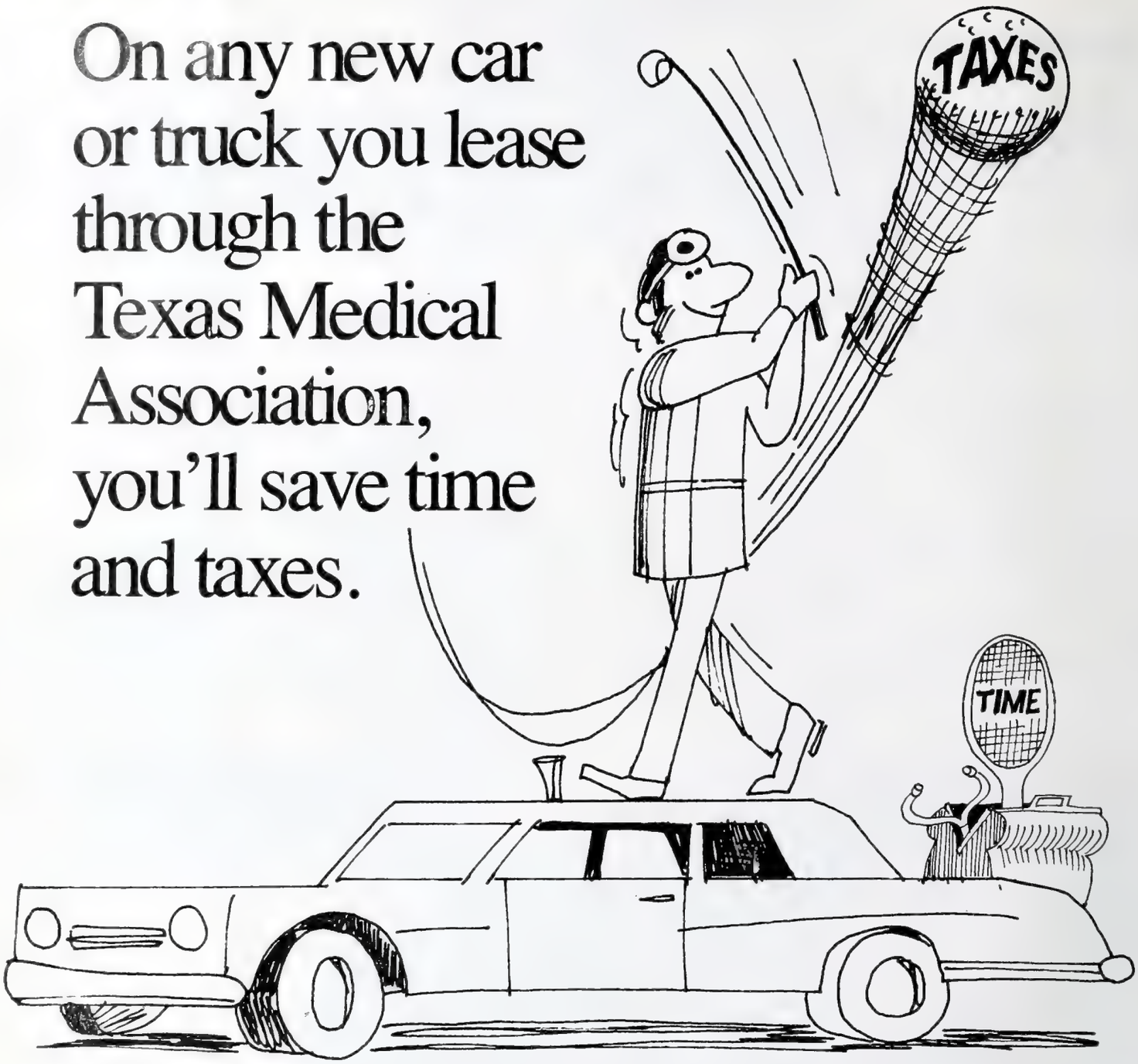

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NEWS

Ad hoc committee sets priorities for activities

Increased communication within the profession, direct doctor-legislator contacts, and extensive liaison with other groups were determined as major areas for pursuit by the special ad hoc committee on professional liability of the Texas Medical Association at its May 27 meeting in Austin.

The ad hoc committee, created by the TMA House of Delegates in early May, is charged with the coordination and implementation of the association's multifaceted approach to the professional liability crisis in the state. The 15-member committee is composed of key TMA officers, council and committee chairmen, and representatives of several specialty groups.

In the area of internal communication, the committee approved the concept of a "Speaker's Letter," a periodic communication from the Speaker of the TMA House of Delegates to delegates, alternate delegates, and county medical society officials. This move was prompted by the desire to more fully disseminate information about actions taken at the state level to physicians at the local level. This idea is now under consideration by the speaker.

With the 1977 session of the Texas Legislature approaching, the committee members stressed the importance of direct physician-legislator contacts. A plan was approved by which local physicians would personally deliver to legislators copies of the TMA survey on professional liability insurance. The survey report documents the severity and the implications of the professional liability crisis on health care services in Texas.

The committee determined that liaison should be established with four major categories of organizations. First, the committee voted to strengthen the dialogue with the groups directly involved in the crisis—hospitals, the insurance industry, and the various attorney groups. Second, the committee approved the broadening of liaison with allied health groups such as the dentists, nurses, and medical assistants. Third, the committee approved the establishment of liaison with other professional groups. Fourth, the group voted to include medical specialty societies in ongoing discussions regarding the problem.

At its initial meeting, the ad hoc committee members received reports on the ongoing activities of TMA in regard to professional liability.

In addition, they received reports on deliberations of the Texas Medical Professional Liability Study Commission.

Communication emphasis

The ad hoc committee members emphasized the importance of communication in the resolution of the crisis. They received an extensive report from Dr. Durwood E. Neal of Fort Worth on the activities of the Council on Communication.

Dr. Neal said a new brochure describing the professional liability insurance situation in Texas would go to press the first week of June. This brochure will be made available to TMA members in quantity, and stands will be available for the brochure's display in physicians' offices. In addition, the council has approved the making of a 12-minute film illustrating the crisis situation in Texas. This film will be used in coordination with physician speaking engagements at the local level. The ad hoc committee urged wide distribution of the film and increased use of the TMA speakers bureau for county medical society and civic programs. The Council on Communication also has prepared speech texts and publicity material for use by physicians before civic and community groups.

Dr. Neal also reported that a series of advertisements to elicit public response to the crisis have been scheduled through December in Texas editions of *Time* and *U.S. News & World Report*, plus *Texas Monthly*, and *Texas Parade*.

The ad hoc committee members agreed to encourage county medical societies to review and strive to improve their relations with local news media so that information regarding the professional liability insurance situation and its effects on patients will reach the public.

State commission progress

Texas Medical Professional Liability Study Commission member Dr. Milton Davis of Dallas told the group of recent actions taken by Subcommittee II which is concerned with the effect of the professional liability problems on the delivery of health services, defensive medicine, medical fees, and hospital charges. The subcommittee has noted several of the findings documented by the TMA professional liability survey including information regarding the curtailment of

NEWS

health services, the skyrocketing malpractice insurance premiums, the unavailability of malpractice insurance, and upward trends in the number and severity of suits and claims. The subcommittee will report to the full commission the survey's finding that Texas physicians cannot significantly increase practice revenue to meet medical practice expenses, including their malpractice premium, by working more hours per week or weeks per year. The subcommittee has accepted documentation of rising hospital costs and the increasing use of defensive medicine procedures by physicians.

An additional area of study by the subcommittee, Dr. Davis reported, is that of discipline, control, and licensure of physicians. Among the subcommittee's findings is the fact that the present laws do not require sufficient reporting to the Texas State Board of Medical Examiners of malpractice suits and claims. The subcommittee's report will recommend that such suits or claims against physicians be reported to the board, that due process must be assured by the board, and that the authority, staff, and funds of the Texas State Board of Medical Examiners should be increased. The subcommittee will also recommend to the full commission that the legislature consider placing nonphysicians on the board.

In addition, Dr. Davis said that the subcommittee has documented the ongoing review procedures conducted by Texas hospitals and has found no need for additional legislation in this area. He said the public is generally not aware of the scope or depth of these review activities and needs to be better informed.

Other areas yet to be considered by the commission include the changing nature of medical knowledge, statutory limits on malpractice awards, definition of negligence, informed consent, admissibility of evidence, recognition of the human factor in medicine, possible recourse following non-meritorious suits, and reasons for the increasing number of suits.

Dr. E. Don Webb of Houston, the other physician member of the commission, reported that consumerism is reflected in most issues considered by the full commission. He serves on the subcommittees considering the existing tort compensation system and the scope of the medical professional liability problem.

He reported that the final draft of a proposal regarding screening panels was being prepared. In addition, he said that commission chairman Page Keeton was working to eliminate informed consent from pleas by plaintiffs. Dr. Webb admitted there was little chance of the commission's approving an overall limitation of liability, but he said that a limitation on awards for pain and suffering might be achieved. In concluding his remarks, Dr. Webb said that the majority of the commission does agree with medicine's proposals to alleviate the professional liability situation.

Dr. Webb estimated that the commission would probably not issue a report until its December deadline.

The date for the second meeting of the ad hoc committee has been tentatively set for this month.

Licenses granted

A record number, 1,738, new licenses were granted by the Texas State Board of Medical Examiners in 1975. The previous high was 1,651 in 1974.

The new licensees included 1,678 doctors of medicine and 60 doctors of osteopathy. The board licensed 894 doctors of medicine by reciprocity and 784 through examination. Osteopaths licensed by reciprocity numbered 34; by examination, 26.

There is now a total of 25,312 phy-

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sicians who are licensed to practice medicine in the state. There are 16,613 doctors of medicine who are in Texas; there are 7,179 doctors of medicine who are located out-of-state. Texas osteopaths who hold licenses number 894. There also are 626 osteopaths located out-of-state who hold Texas licenses.

NEWS

Rebates illegal, unethical

In a recent letter to the Texas Medical Association, Thomas M. Tierney, director of the Bureau of Health Insurance, discussed the illegalities of rebate arrangements in regard to tax-financed health care programs and the legal consequences of such practices.

The letter to state medical societies was prompted by recent disclosures by Congress and the CBS program "Sixty Minutes" of the practice of some physicians receiving rebates from independent laboratories.

"Although only a small number of individuals may be involved in such practices, the criticism tends to be directed toward everyone associated with this area of health care," Tierney stated.

He said that it is not generally known that this practice is in violation of the Medicare law (42 United States Code 1395nn(b)) which provides:

"whoever furnishes items or services to an individual for which payment is made or may be made under this subchapter and who solicits, offers, or receives any (1) kickback or bribe in connection with the furnishing of such items or services or the making or receipt of such payment, or (2) rebate of any fee or charge for referring any such individual to another person for the furnishing of such items or services, shall be guilty of a misdemeanor and upon conviction thereof shall be fined not more than $10,000 or imprisoned for not more than one year, or both."

Tierney said the government plans to seek prosecution in any cases which come to light. In addition, he asked that physicians report offers tendered to them regarding this type of activity.

It should be noted that such practices also violate the Code of Ethics of the American Medical Association as interpreted by the AMA Judicial Council. In published opinions, the council has stated in part, "A physician may receive no profit whatever from his patient other than payment for rendered medical services. Hence it should be apparent that no rebate of any kind, in any form or from any source can be accepted."

Communication projects aimed at public involvement

Two major projects—a brochure and a series of advertisements—have been undertaken by the Texas Medical Association's Council on Communication to involve the public in seeking solutions to the professional liability insurance crisis in the state.

The brochure, which carries the title, "No Texan Can Escape this Epidemic," discusses how the crisis affects Texas patients in terms of money and availability of quality health care. The flyer also includes a message which may be signed by citizens for forwarding to state legislators through the Texas Medical Association.

The brochure, now in production, will be made available in quantity to Texas doctors in the near future. In addition, a small counter display will be available for doctors' offices.

Physicians wishing to obtain samples or to order these materials should contact the Department of Communication, TMA, 1801 N Lamar Blvd, Austin 78701.

The series of advertisements, scheduled through December in major Texas publications, seeks to elicit

public response to the professional liability insurance crisis. Two messages are appearing in issues of *Texas Monthly* and *Texas Parade* and Texas editions of *Time* and *U.S. News & World Report*.

The ads refer to the recent Belden Survey which found that 80% of Texans want immediate legislative action in regard to the malpractice problem. The ad incorporates a coupon that addresses itself to legislators but is sent to TMA. The objective of this approach is to apply a persuasive force to legislators, without filling their mailboxes.

The Council on Communication will continue to implement programs to heighten the public's awareness of the problem, according to Dr. Durwood Neal of Fort Worth, council chairman.

Swine flu vaccine to be available soon

Availability of the bivalent swine influenza vaccine for use with high-risk populations is scheduled for July 20, according to Dr. P. W. Mallory, deputy director of health maintenance, Texas Department of Health Resources. However, due to manufacturing error, there may be a delay of two or three weeks.

Dr. Mallory stressed that the state agency would rely to a great extent on private physicians to provide immunizations. The vaccine will be available from local health departments and regional TDHR offices.

Dr. Mallory stated that the national Center for Disease Control has designed an informed consent form for use with the immunization program. The TDHR legal counsel is expected to issue an opinion on informed consent for immunizing persons under age 18 who are married or who otherwise can give consent.

The department is currently contacting county medical societies to provide details on the immunization program. Private physicians administering the vaccine are urged to submit regular reports on the vaccine's use. Forms can be obtained from health departments along with the free vaccine.

CHAMPUS intermediary changes July 1

As of July 1, Health Application Systems, Inc, will become the fiscal administrator for CHAMPUS (Civilian Health Medical Program for the Uniformed Services) in a five-state area that includes Texas. The company was awarded the contract by the Department of Defense last March.

Providers of CHAMPUS/CHAMPVA services in Texas should mail claims to: Health Application Systems, Inc, P O Box 85022, San Diego, Calif 92138. The local telephone number for the San Diego office is (714) 297-7600. The toll free line is 1-800-854-2125 for Texas.

Under the new agreement, HAS will provide claims processing and payment, as well as establish relations with both the beneficiaries and the providers of health care services in Arizona, California, Nevada, New Mexico, and Texas.

Medical education testimony presented to state committee

Full funding of Texas' six existing medical schools, expansion and funding of additional graduate training positions in the state, and concentration upon the provision of additional graduate training positions for family practitioners were items supported by Dr. William F. Ross in testimony on behalf of the Texas Medical Association before the Education Subcommittee of the Joint Advisory Committee on Government Operations. The committee was created by the 64th Texas Legislature and has the responsibility to make recommendations to improve the efficiency and

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Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles
Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References
Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material
Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material
Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials
Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters
Letters will be published at the discretion of the Managing Editor and consultants.

News
News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings
Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries
Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns
Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

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All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

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Publication of any article or statement is not to be deemed an endorsement of the views expressed therein, nor shall publication of any advertisement be considered an endorsement of or approval of the product or service involved.

NEWS

economy of state government operations.

Dr. Ross, chairman of the TMA Council on Medical Education and Hospitals, told the subcommittee that TMA believes that the six existing schools for doctors of medicine should be adequately and fully funded prior to approval of any new schools. He added that studies clearly show that Texas medical schools have dramatically increased their numbers of graduates in the last few years.

He cited the shortage of training positions in the state as an obstacle to retain medical graduates in the state. "Many studies show that physicians often select the place of their graduate training as their future practice site," Dr. Ross remarked.

In particular, Dr. Ross said, it is important that the number of primary care and family practice training positions be increased. He indicated that Texas medical schools had already begun efforts in this area, but that to assure an adequate number of family practitioners in a short period of time with the least amount of tax dollars additional action would be required.

Utilization review revisions proposed

In a letter to John A. Svahn, acting administrator, Social and Rehabilitation Service, Department of Health, Education and Welfare, Dr. L. S. Thompson, Jr., Texas Medical Association president, proposed a revision to the new utilization review regulations.

Dr. Thompson protested the section which requires admission review prior to the performance of elective surgery or elective procedures, but not later than the third working day after admission, whichever is earlier. He said this regulation represented defacto preadmission certification.

"There is ample evidence that Congress has not legislated the concept of preadmission certification into the Medicare and Medicaid laws, and for an administrative agency to take such action is a usurpation of the legislative prerogatives of the members of Congress," Dr. Thompson said.

The TMA president continued that the practicality of the section appeared to be very doubtful. He contended that objective evidence will refute allegations regarding the performance of unnecessary surgery by physicians. In closing, he urged the administrator to delete the requirement of precertification of elective surgery and procedures in a revision of the regulations.

Texas Tech completes first expansion phase

Occupancy of the first construction phase of permanent facilities for the Texas Tech University School of Medicine will begin this summer.

Ground was broken in 1973 for the construction of the six-level medical building, a $35 million complex containing more than 800,000 square feet. As part of the development the architect created a 700 x 60 foot raised outdoor plaza around the building providing an expansive view of the Texas plain.

The construction project is designed to help satisfy the existing need for additional practicing physicians in the state, particularly in the West Texas area where the physician to population ratio is approximately half the national average. The school of medicine is an integral part of a long-range, multi-phased plan for the development of health care education and health services in West Texas.

Prior to the completion of the permanent facility, ambulatory clinical teaching is being carried out in Thompson Hall, a renovated dormi-

tory which houses the school's outpatient clinics. Inpatient teaching is conducted in affiliated hospitals in the West Texas region. The completion of the first phase of construction will permit eventual entering medical school classes of 100 students.

The major inpatient teaching facility will be provided by the Lubbock County Hospital District which is constructing a 245-bed primary teaching hospital that is located adjacent to, and physically attached to, the permanent school of medicine building. The hospital will serve as an essential part of the educational, health care service and research complex being developed by the Lubbock medical school.

The school is placing strong emphasis on family medicine. Regional Academic Health Centers have been established in Amarillo and El Paso and currently are providing education and training programs for both medical students and house staff.

Similarly, rural health programs are being developed by the Department of Family Practice in conjunction with other School of Medicine departments. These programs will relate health care delivery needs and health manpower needs to the teaching activities of the school.

Medicare, Medicaid costs rising due to inflation

According to a report prepared by the General Accounting Office on the cost history of Medicare and Medicaid from 1966-1975, the rise in costs for the programs was primarily due to inflation, plus more services and more eligible beneficiaries.

During the years covered by the report, the cost of Medicare rose $10.4 billion and the cost of Medicaid rose $9.8 billion. The report also states that the GAO has made 83 recommendations in reports to the Congress, its committees and members, and the Secretary of Health, Education and Welfare to control unnecessary Medicare and Medicaid costs. While in most cases, HEW has taken at least some action to carry out these recommendations, many have not been fully implemented, according to the report.

Occupancy of the first construction phase of the new Texas Tech University School of Medicine facilities in Lubbock will begin this summer. Completion of the project will permit eventual entering medical school classes of 100 students.

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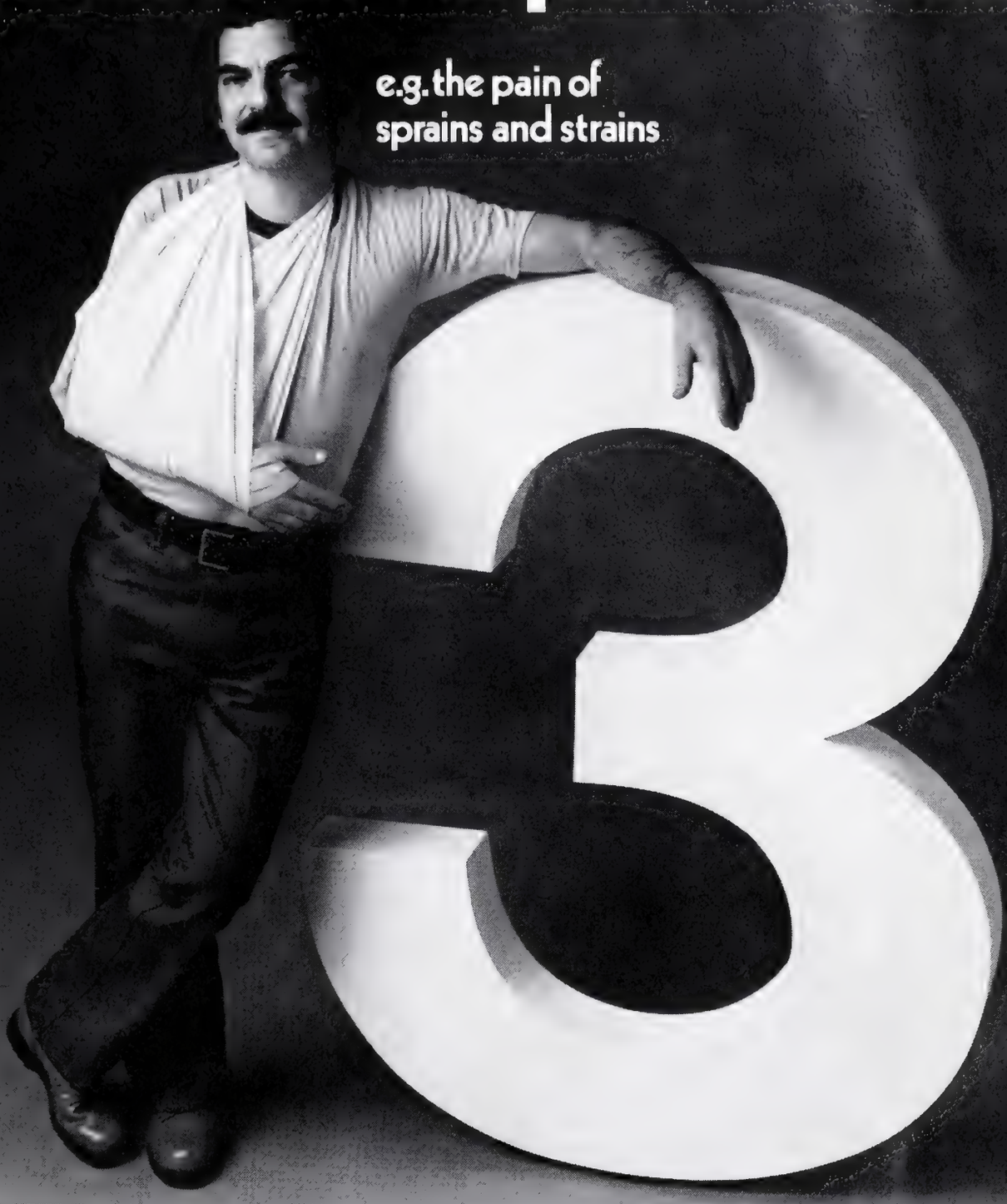

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1. Stock, J. M., Surks, M. I., and Oppenheimer, J. H. Replacement dosage of L-thyroxine in hypothyroidism. A re-evaluation. New Engl. J. Med. 290:529-33, 1974.

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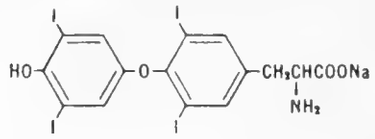
Description: SYNTHROID (sodium levothyroxine) **Tablets** and SYNTHROID **Injection** contain synthetic crystalline sodium levothyroxine (L-thyroxine) L-thyroxine is the principal hormone secreted by the normal thyroid gland



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Indications: SYNTHROID (sodium levothyroxine) products serve as specific replacement therapy for reduced or absent thyroid function of any etiology. SYNTHROID **Injection** can be used intravenously whenever a rapid onset of effect is critical, and either intravenously or intramuscularly in hypothyroid patients whenever the oral route is precluded for long periods of time

Contraindications: There are no absolute contraindications to SYNTHROID (sodium levothyroxine) therapy. Relative contraindications include acute myocardial infarction, uncorrected adrenal insufficiency and thyrotoxicosis. (See WARNINGS)

Warnings: Patients with cardiovascular diseases warrant particularly close attention during the restoration of normal thyroid function by any thyroid drug. In such cases, low initial dosage increased slowly by small increments is indicated. Occasionally, the cardiovascular capacity of the patient is so compromised that the metabolic demands of the normal thyroid state cannot be met. Clinical judgment will then dictate either a less-than-complete restoration of thyroid status or reduction in thyroid dosage.

Endocrine disorders such as diabetes mellitus, adrenal insufficiency (Addison's disease), hypopituitarism and diabetes insipidus are characterized by signs and symptoms which may be diminished in severity or obscured by hypothyroidism. SYNTHROID (sodium levothyroxine) therapy for such patients may aggravate the intensity of previously obscured symptoms and require appropriate adjustment of therapeutic measures directed at these concomitant disorders

Thyroid replacement may potentiate the effects of anticoagulants. Patients on anticoagulant therapy should have frequent prothrombin determinations when instituting thyroid replacement to gauge the need to reduce anticoagulant dosage

Precautions: Overdosage with any thyroid drug may produce the signs and symptoms of thyrotoxicosis, but resistance to such factitious thyrotoxicosis is the general rule. With SYNTHROID (sodium levothyroxine) **Tablets,** the relatively slow onset of action minimizes the risk of overdose but close observation in the weeks following institution of a dosage regimen is advised. Treatment of thyroid hyperactivity induced by oral medication is confined to interruption of therapy for a week, followed by reinstitution of daily therapy at an appropriately reduced dosage.

Adverse reactions: Adverse reactions are due to overdose and are those of induced hyperthyroidism

Dosage and administration: For most adults, a final dosage of 100 mcg (0.1 mg) to 200 mcg (0.2 mg) of SYNTHROID (sodium levothyroxine) **Tablets** daily will restore normal thyroid function and only occasionally will patients require larger doses. Failure to respond adequately to a daily oral intake of 400 mcg (0.4 mg) or more is rare and should prompt reconsideration of the diagnosis of hypothyroidism, special investigation of the patient in terms of malabsorption of L-thyroxine from the gastrointestinal tract or poor adherence to therapy.

The concomitant appearance of other diseases, especially cardiovascular diseases, usually dictates a replacement regimen with initial doses smaller than 100 mcg/day (0.1 mg).

In otherwise healthy adults with relatively recent onset of hypothyroidism, full replacement dose of 150 mcg (0.15 mg) or 200 mcg (0.2 mg) has been instituted immediately without untoward effect and with good therapeutic response. General experience, however, favors a more cautious approach in view of the possible presence of subclinical disorders of the cardiovascular system or endocrinopathies.

The age and general physical condition of the patient as well as the severity and duration of hypothyroid symptoms determine the starting dosage and the rate of incremental dosage increase leading to a final maintenance dosage. In the elderly patient with long standing disease, evidence of myxedematous infiltration and symptomatic, functional or electrocardiographic evidence of cardiovascular dysfunction, the starting dose may be as little as 25 mcg (0.025 mg) per day. Further incremental increases of 25 mcg (0.025 mg) per day may be instituted at three to four week intervals depending on patient response. Conversely, otherwise healthy adults may be started at higher daily dosage and raised to the full replacement dosage in two to three weeks. Clearly it is the physician's judgment of the severity of the disease and close observation of patient response which determines the rate of dosage titration.

Laboratory tests to monitor thyroid replacement therapy are of limited value. Although measurement of normal blood levels of thyroxine in patients on replacement regimens frequently coincides with the clinical impression of normal thyroid status, higher than normal levels on oral replacement of levothyroxine occasionally occur and should not be considered evidence of overdosage per se.

In all cases, clinical impression of the well-being of the patient takes precedence over laboratory determination in determining the appropriate individual dosage.

In infants and children, there is a great urgency to achieve full thyroid replacement because of the critical importance of thyroid hormone in sustaining growth and maturation. Despite the smaller body size, the dosage needed to sustain a full rate of growth, development and general thriving is higher in the child than in the adult, as much as 300 mcg (0.3 mg) to 400 mcg (0.4 mg) per day.

In myxedema coma or stupor, without concomitant severe heart disease, 200 to 500 mcg of SYNTHROID **Injection** may be administered intravenously as a solution containing 100 mcg/ml. Although the patient may show evidence of increased responsivity within six to eight hours, full therapeutic effect may not be evident until the following day. An additional 100 to 300 mcg or more may be given on the second day if evidence of significant and progressive improvement has not occurred. Like the oral dosage form, SYNTHROID **Injection** produces a predictable increase in the circulating level of hormone with a long half-time. This usually precludes the need for multiple injections but continued daily administration of lesser amounts intravenously should be maintained until the patient is fully capable of accepting a daily oral dose.

In the presence of concomitant heart disease, the sudden administration of such large doses of L-thyroxine intravenously is clearly not without its cardiovascular risks. Under such circumstances, intravenous therapy should not be undertaken without weighing the alternative risks of the myxedema coma and the cardiovascular disease. Clinical judgment in this situation may dictate smaller intravenous doses of levothyroxine.

SYNTHROID **Injection** by intravenous or intramuscular routes can be substituted for the oral dosage form when ingestion of SYNTHROID **Tablets** is precluded for long periods of time.

How Supplied: SYNTHROID (sodium levothyroxine) **Tablets** are supplied as scored, color-coded compressed tablets in 6 concentrations: 25 mcg (0.025 mg)—orange . . . 50 mcg (0.05 mg)—white . . . 100 mcg (0.1 mg)—yellow . . . 150 mcg (0.15 mg)—blue. . . 200 mcg (0.2 mg)—pink . . . 300 mcg (0.3 mg)—green.

SYNTHROID (sodium levothyroxine) for **Injection** is supplied in 10 ml vials containing 500 mcg of lyophilized active ingredient and 10 mg of Mannitol, U.S.P. A separate 5 ml vial containing Sodium Chloride Injection, U.S.P. is provided as a diluent.

Directions for reconstitution: Reconstitute the lyophilized sodium levothyroxine by aseptically adding 5 ml of the Sodium Chloride Injection, U.S.P. to the vial. Shake vial to insure complete mixing. **Use immediately** after reconstitution. Discard any unused portion.

U.S. Pat. 2,889,363

January 1975

Syphilis treatment revised by CDC

The Center for Disease Control has released a revision of the recommended treatment schedules for syphilis. The recommendations were established by the Venereal Disease Control Advisory Committee after deliberation with therapy experts.

Penicillin continues to be the drug of choice for all stages of syphilis. Every effort should be made to document penicillin allergy before choosing other antibiotics because these antibiotics have been studied less extensively than penicillin. Physicians are cautioned to use no less than the recommended dosages of antibiotics. Highlights of the recommendations follow.

Early syphilis (primary, secondary, latent syphilis of less than one year's duration):

(1) Benzathine penicillin G—2.4 million units total by intramuscular injection at a single session;
or
(2) Aqueous procaine penicillin G—4.8 million units total: 600,000 units by intramuscular injection daily for 8 days; or
(3) Procaine penicillin G in oil with 2% aluminum monostearate—4.8 million units total by intramuscular injection: 2.4 million units at first visit, and 1.2 million units at each of two subsequent visits three days apart.

Patients who are allergic to penicillin:

(1) Tetracycline hydrochloride—500 mg four times a day by mouth for 15 days; or
(2) Erythromycin (stearate, ethylsuccinate or base)—500 mg four times a day by mouth for 15 days.

Syphilis of more than one year's duration (latent syphilis of indeterminate or more than one's duration, cardiovascular, late benign, neurosyphilis);

(1) Benzathine penicillin G—7.2 million units total: 2.4 million units by intramuscular injection weekly for three successive weeks; or
(2) Aqueous procaine penicillin G—9.0 million units total: 600,000 units by intramuscular injection daily for 15 days.

Cerebrospinal fluid examination is mandatory in patients with suspected, symptomatic neurosyphilis. This examination is also desirable in other patients with syphilis of greater than one year's duration to exclude asymptomatic neurosyphilis.

Patients who are allergic to penicillin:

(1) Tetracycline hydrochloride—500 mg four times a day by mouth for 30 days; or
(2) Erythromycin (stearate, ethylsuccinate or base)—500 mg four times a day by mouth for 30 days.

Syphilis in pregnancy:

A. For patients at all stages of pregnancy who are not allergic to penicillin: Penicillin in dosage schedules appropriate for the stage of syphilis as recommended for the treatment of nonpregnant patients.

B. For patients of all stages of pregnancy who are allergic to penicillin: Erythromycin (stearate, ethylsuccinate or base) in dosage schedules appropriate for the stage of syphilis, as recommended for the treatment of non-pregnant patients. Although these erythromycin schedules appear safe for mother and fetus, their efficacy is not well established. Therefore, the documentation of penicillin allergy is particularly important before treating a pregnant woman with erythromycin.

Follow-up: Pregnant women who have been treated for syphilis should have monthly quantitative nontreponemal serologic tests for the remainder of the current pregnancy. Women who show a four-fold rise in titer should be retreated. After delivery, follow-up is as outlined for nonpregnant patients.

Congenital syphilis: Infants with con-

genital syphilis should have a cerebrospinal fluid examination before treatment.

Infants with abnormal CSF:

(1) Aqueous crystalline penicillin G, 50,000 units/kg intramuscularly or intravenously daily in two divided doses for a minimum of ten days;
or
(2) Aqueous procaine penicillin G, 50,000 units/kg intramuscularly daily for a minimum of ten days.

Infants with normal CSF:

Benzathine penicillin G, 50,000 units/kg intramuscularly in a single dose.

Penicillin therapy for congenital syphilis after the neonatal period should be with the same dosages used for neonatal congenital syphilis. For larger children the total dose of penicillin need not exceed the dosage used in adult syphilis of more than one year's duration. After the neonatal period, the dosage of erythromycin and tetracycline should not be given to children less than eight years of age.

Follow-up and retreatment: All patients with early syphilis and congenital syphilis should be encouraged to return for repeat quantitative nontreponemal tests three, six, and 12 months after treatment. Patients with syphilis of more than one year's duration should also have a repeat serologic test 24 months after treatment. Careful follow-up serologic testing is particularly important in patients treated with antibiotics other than penicillin. Examination of CSF should be planned as part of the last follow-up visit after treatment with alternative antibiotics.

The possibility of reinfection should always be considered when retreating patients with early syphilis. A CSF examination should be performed before retreatment unless reinfection and a diagnosis of early syphilis can be established.

Retreatment should be considered when:

(1) Clinical signs or symptoms of syphilis persist or recur;
(2) There is a sustained four-fold increase in the titer of a nontreponemal test;
(3) An initially high-titer nontreponemal test fails to show a four-fold decrease within a year.

Patients should be retreated with the schedules recommended for syphilis of more than one year's duration. In general, only one retreatment course is indicated because patients may maintain stable, low titers of nontreponemal tests or have irreversible anatomical damage.

Patients who have been exposed to infectious syphilis within the preceding three months and other patients who on epidemiologic grounds are at high risk for syphilis should be treated as for early syphilis. Every effort should be made to establish a diagnosis in these cases.

The complete report is published in the April 9 *Morbidity and Mortality Weekly Report* of the Center for Disease Control in Atlanta.

NEWS

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 5/31/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+ 9.0%	−33.0%	− 6.2%	1.5%
Loomis-Sayles Mutual Fund	+ 6.4%	−21.0%	− 3.7%	3.3%
Mercantile Bank Equity Fund	+ 9.6%	−35.8%	−16.5%	3.2%
Mercantile Bank Fixed Income Fund	+ 2.1%	−13.5%	− 8.6%	7.9%
T Rowe Price Growth Stock Fund	+ 4.5%	−34.1%	− 1.9%	2.2%
T Rowe Price New Income Fund	+ 0.2%	N/A	N/A	8.0%
Stein Roe & Farnham Balanced Fund	+ 5.6%	−24.9%	+ 4.1%	3.2%
Standard & Poor 500 Stock Average	+11.1%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+14.4%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

Editor's note: "Capital Comments" is prepared by the TMA Office of General Counsel to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: COURT TEST OF PLANNING ACT. Lawsuits contesting the constitutionality of the Health Planning and Resources Development Act have been filed by the State of North Carolina and the National Association of Regional Councils. The American Medical Association is to join the North Carolina suit. The suit charges that the planning law would force the state to violate its own constitution or lose eligibility for federal health funds. The new law requires states to pass certificate of need legislation, which has already been declared unconstitutional by the State Supreme Court of North Carolina. The suit filed by the NARC, a Washington based organization of local government councils, charges that the health planning law is an illegal intrusion into the rights of state and local governments by the federal government. The boards of health systems agencies tend to be composed of laymen selected by the federal government rather than by locally elected officials, the suit contends, and are unanswerable to the citizens of the jurisdictions they represent.

AUSTIN: COURT SAYS BOARD OF CENSORS RECORDS NOT SUBJECT TO SUBPOENA. In a recent Texas malpractice suit, the plaintiff sought to subpoena records of the Medical Society Board of Censors. The court held that the records sought by the plaintiff were unavailable to the plaintiff because Article 447b, Sec 3, RCS, exempting such records from subpoena. Records were also immaterial because they related to a collateral matter.

WASHINGTON: CLINICAL LABS BILL PASSES SENATE. The Senate, by a vote of 64-11, passed S 1737, the Clinical Laboratories Improvement Act. Under the bill, all clinical laboratories would be subject to licensure by the Secretary of the Department of Health, Education and Welfare or by states to whom the secretary delegated the licensure authority. The secretary retains authority to exempt laboratories of individual physicians who perform laboratory services solely as an adjunct to treatment of their own patients.

WASHINGTON: LABOR'S BACKING OF KENNEDY-GORMAN NHI BILL SHAKEN. Daniel Shannon, executive director of the Central States, Southeast, and Southwest Areas Health, Welfare, and Pension Fund of the Teamsters Union, recently told the National Leadership Conference on America's Health Policy: "We have become increasingly distressed . . . by the possibility that a national health insurance plan which runs all of the money for the purchase of health care to the federal government, such as the Health Security Act, might be adopted. . . . We can-

not support a program that gives the federal government total control over the financing and delivery of health care."

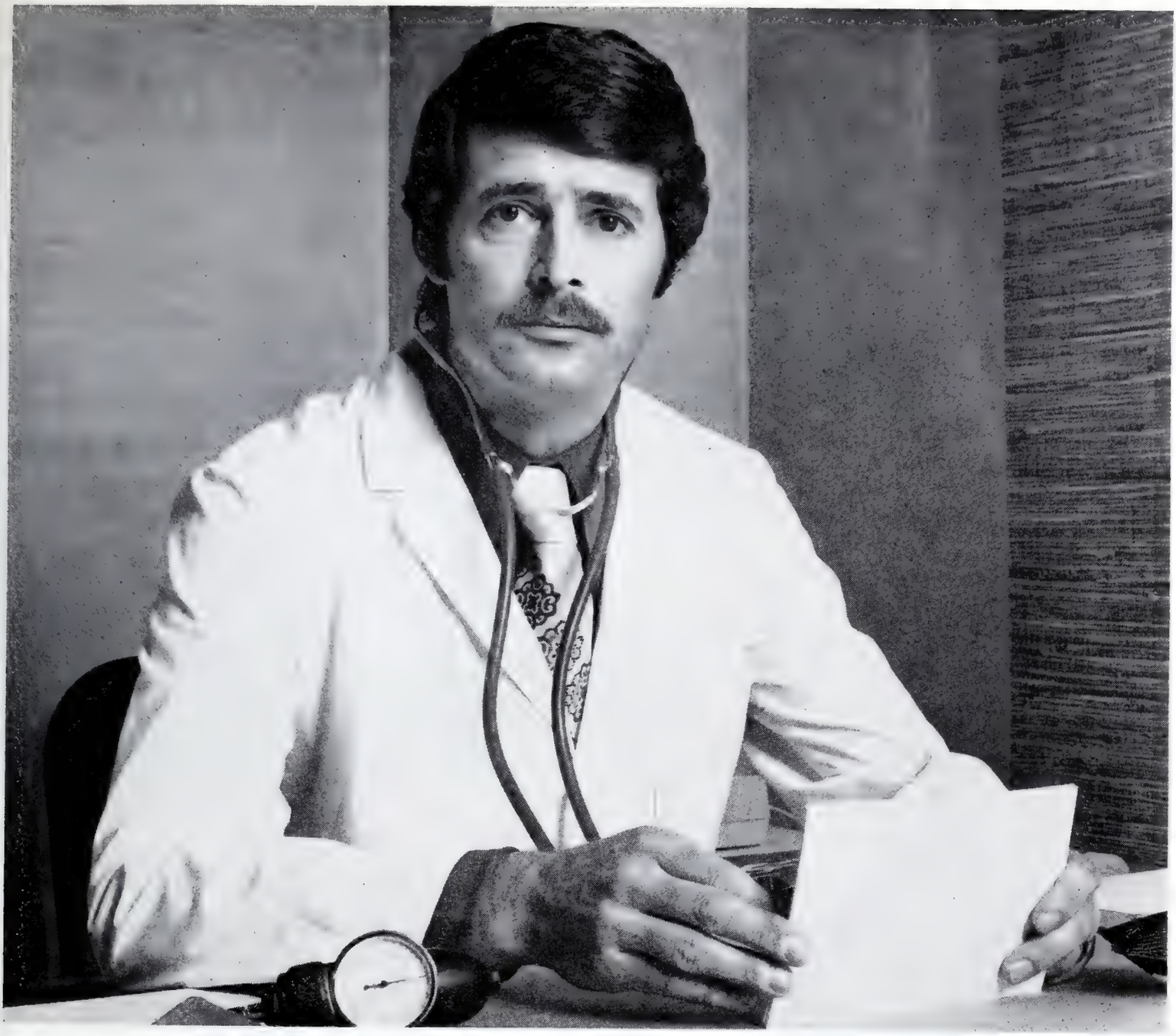
WASHINGTON: FIVE STATES JOIN IN SUIT. California, Colorado, Kentucky, Maryland, and Pennsylvania have entered into a suit to prevent the enforcement of Section 111 of Medicare legislation enacted last December, with other states expected to take similar action. Legislation in PL 94-182 involves technical amendments to Medicare, but included disputed Section 111 which would require states to waive sovereign immunity in certain Medicaid suits or lose 10% of federal Medicaid money.

COLORADO: SUNSET LAW ENACTED. Colorado has become the first state to enact a "sunset" law. In essence, the law provides a system for the periodic review and termination, continuation, or reestablishment of state regulatory agencies by the state legislature. Periodically, state regulatory agencies will have to demonstrate their need and usefulness to the legislature; otherwise, they will automatically be terminated.

WASHINGTON: HELLMAN NAMED TO HEAD HSA. Louis Hellman, deputy assistant secretary for population affairs for the Department of Health, Education and Welfare has been chosen to be the next administrator for the Health Services Administration (HSA).

WASHINGTON: COMMITTEE REPORTS ON HR 13501. The House Ways and Means Committee has orally reported H R 13501 which would amend the Social Security Act to: (1) prevent a rollback of physician's reasonable charges under Medicare below that level which was recognized for fiscal 1975; (2) extend for one year the time for Congress to evaluate and act on the Institute of Medicine study of payment for services of teaching physicians; and (3) continue the updating of physician fee screens as of July 1 of each year rather than having them coincide with the new fiscal year which now begins on Oct 1.

WASHINGTON: TAFT NAMED HEW GENERAL COUNSEL. William H. Taft, currently assistant to the HEW secretary, will become HEW's general counsel. Taft is replacing John Rhinelander who left HEW to become Secretary of the Department of Housing and Urban Development.



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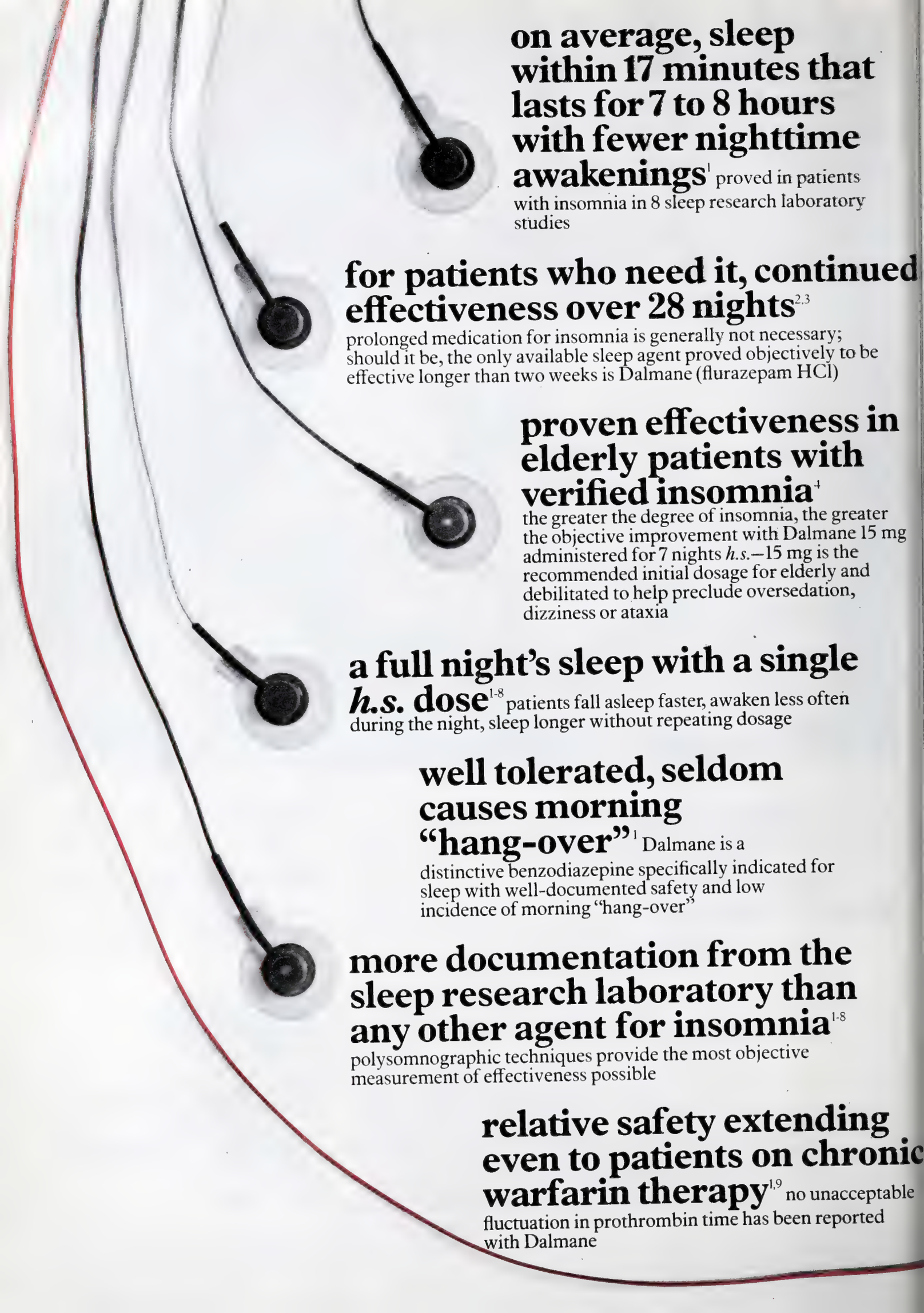


on average, sleep within 17 minutes that lasts for 7 to 8 hours with fewer nighttime awakenings[1] proved in patients with insomnia in 8 sleep research laboratory studies

for patients who need it, continued effectiveness over 28 nights[2,3]
prolonged medication for insomnia is generally not necessary; should it be, the only available sleep agent proved objectively to be effective longer than two weeks is Dalmane (flurazepam HCl)

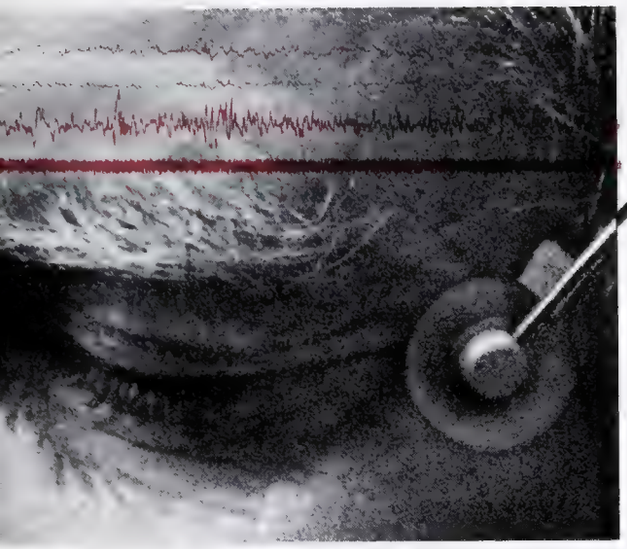
proven effectiveness in elderly patients with verified insomnia[4]
the greater the degree of insomnia, the greater the objective improvement with Dalmane 15 mg administered for 7 nights *h.s.*—15 mg is the recommended initial dosage for elderly and debilitated to help preclude oversedation, dizziness or ataxia

a full night's sleep with a single *h.s.* dose[1-8] patients fall asleep faster, awaken less often during the night, sleep longer without repeating dosage

well tolerated, seldom causes morning "hang-over"[1] Dalmane is a distinctive benzodiazepine specifically indicated for sleep with well-documented safety and low incidence of morning "hang-over"

more documentation from the sleep research laboratory than any other agent for insomnia[1-8]
polysomnographic techniques provide the most objective measurement of effectiveness possible

relative safety extending even to patients on chronic warfarin therapy[1,9] no unacceptable fluctuation in prothrombin time has been reported with Dalmane



The Dalmane® (flurazepam HCl) difference.

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Please see following page for a summary of product information.

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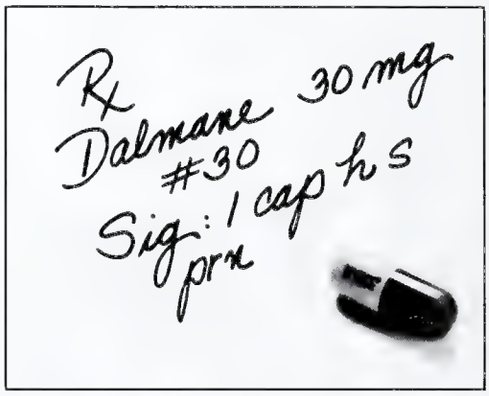
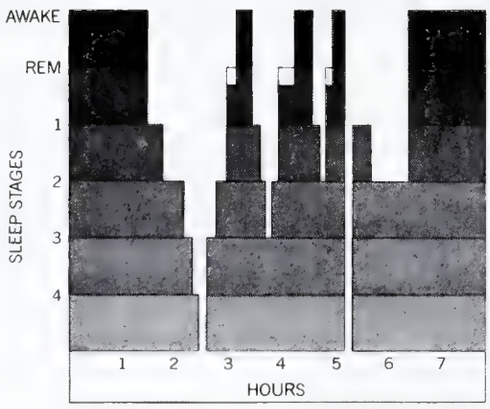
Objectively proved in the sleep research laboratory:

- Sleep within 17 minutes, on average
- Sleep for 7 to 8 hours, on average
- Sleep with fewer nighttime awakenings
- Continued effectiveness over 28 nights of administration





Trouble Falling Asleep, Staying Asleep, Sleeping Long Enough

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

REFERENCES:

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CONTINUING EDUCATION COURSES

JULY

Psychiatry

Title: Advanced Tutorial in Rorschach
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Jul 10-11, 1976
Duration: Continuous, 2 days, 5-6 hours instruction per day, 11 total course hours
Fee: $90
Designed For: Specialists in Psychiatry
Teaching Methods: Audiovisual materials, open question, seminar, television
Contact: Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Radiology and Radioisotopes

Title: External Beam, Interstitial, and Intracavitary Dosimetry—Principles
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Dates: Jul 6-16, 1976
Duration: Continuous, 10 days, 8 hours instruction per day, 80 total course hours
Fee: $350
Designed For: Specialists
Enrollment: Maximum, 15
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: External Beam, Interstitial, and Intracavitary Dosimetry—Manual and Computer Methods of Calculation
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Dates: Jul 19-30, 1976
Duration: Continuous, 10 days, 8 hours instruction per day, 80 total course hours
Fee: $350
Designed For: Specialists
Enrollment: Maximum, 15
Teaching Methods: Audiovisual materials, enrollee performs procedure, lecture, open question
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

AUGUST

Cardiovascular Disease

Title: Tutorials in the Tetons: Cardiac Emergencies (Second Annual)
Sponsors: American College of Cardiology; University of Nebraska Cardiovascular Center, Omaha; Northern Rocky Mountain Continuing Education Division of the Mountain States
Location of Course: Explorers' Room, Jackson Lake Lodge, Grand Teton National Park, Moran, Wyo
Dates: Aug 28-30, 1976
Fee: Members, $150; Nonmembers, $175
Credit: 11½ hours, Category I, AMA Physician's Recognition Award; State Board of Education, Maryland
Contact: Miss Mary Anne McInerny, Director, Department of Continuing Education Programs, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014

Hematology

Title: Topics in Clinical Hematology and Oncology: Disorders of the Lymphoid and Plasma Cells
Sponsors: American College of Physicians; American Society of Hematology; American Association for Cancer Education; Colby College; Mid-Maine Medical Center; Maine Division, American Cancer Society
Location of Course: Thayer Hospital, Dean Medical Education Center, Waterville, Me
Dates: Jul 12-17, 1976
Credit: Category I, AMA Physician's Recognition Award
Contact: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine St, Philadelphia 19104

Ophthalmology

Title: Symposium on External Eye Disease
Sponsors: UT Medical School at Houston, Program in Ophthalmology
Location of Course: Hermann Hospital Auditorium, 1203 Ross Sterling, Houston
Date: Aug 21, 1976
Duration: 1 day, 8 hours instruction
Fee: $50
Designed For: Specialists in Ophthalmology
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Richard S Ruiz, Director, Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77025

Radiology and Radioisotopes

Cancelled: High Energy Electron, X-Ray and Neutron Dosimetry; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston; Aug 2-7, 1976

Urology

Title: Urology Oncology Seminar
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: Room 1113A, Prudential Building, Texas Medical Center, Houston
Dates: Aug 5-6, 1976
Contact: UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

Other: Mammography

Title: Mammography Training for the Early Diagnosis of Breast Cancer
Sponsors: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston; National Cancer Institute; American College of Radiology
Location of Course: Mammography Conference Room, Department of Diagnostic Radiology, MD Anderson Hospital and Tumor Institute, Texas Medical Center, Houston
Dates: Aug 16-20, 1976
Duration: 5 days, 8 hours instruction per day, 40 total course hours
Fee: None
Designed For: Specialists in Radiology; Residents in Radiology; Radiologic technologists
Enrollment: Maximum, 4 physicians and 4 technologists
Credit: Category I, AMA Physician's Recognition Award; American College of Radiology
Teaching Methods: Audiovisual materials, lecture, live clinic demonstration, round table discussion
Contact: Dawn Nevling Shull, Project Coordinator, Department of Diagnostic Radiology, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, 6723 Bertner Dr, Houston 77030

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COMING MEETINGS

ROCKY MOUNTAIN CANCER CONFERENCE

The 30th Annual Rocky Mountain Cancer Conference, cosponsored by the American Cancer Society, Colorado Division, and the Colorado Medical Society, is scheduled for Jul 16-17, 1976, at the Brown Palace Hotel in Denver. The theme of the meeting is Continuum of Cancer Care: A Team Effort. A special luncheon will feature speaker Dr. Richard E. Palmer, President of the American Medical Association. There is no registration fee, and the meeting has been approved by the American Academy of Family Physicians.

Contact: Rocky Mountain Cancer Conference, 1809 E 18th Ave, Denver 80218.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER

The 19th Annual Ruidoso Summer Clinic of the American Academy of Family Physicians, New Mexico Chapter, will be held Jul 19-22, 1976, at the Inn of the Mountain Gods, Mescalero, NM. The University of Arizona College of Medicine will provide the scientific portion of the program.

Contact: AAFP, New Mexico Chapter, Box 456, Sunland Park, NM 88063.

INTERNATIONAL CONGRESS OF HYPNOSIS AND PSYCHOSOMATIC MEDICINE

The Seventh International Congress of Hypnosis and Psychosomatic Medicine will meet in Philadelphia Jul 1-3, 1976. The meetings, sponsored by the University of Pennsylvania and the Institute of Pennsylvania Hospital, will take place at the Marriott Hotel. The Society for Clinical and Experimental Hypnosis and the American Society of Clinical Hypnosis are meeting in conjunction with the International Congress. Abstracts from members in 17 different countries have been submitted for the scientific program. In addition to these contributions, a number of major symposia are scheduled.

Contact: Seventh International Congress, 111 N 49th St, Box 122, Philadelphia 19139.

CURRENT NATIONAL MEETINGS

AMERICAN COLLEGE OF PHYSICIANS, Thayer Hospital, Dean Medical Education Center, Waterville, Me, Jul 12-17, 1976. Postgraduate course entitled Topics in Clinical Hematology and Oncology: Disorders of the Lymphoid and Plasma Cells. Cosponsored by American Society of Hematology; American Association for Cancer Education; Colby College, Waterville, Me; Mid-Maine Medical Center; Main Division, American Cancer Society. Category I, AMA Physician's Recognition Award. Contact: Registrar, Postgraduate Courses, American College of Physicians, 4200 Pine St, Philadelphia 19104.

INSTITUTE FOR SEX RESEARCH, Seventh Annual Summer Program in Human Sexuality, Bloomington, Ind, Jul 21-30, 1976. Lectures, question and answer sessions, panels, and informal group discussions covering sex behavior, sociosexual issues, sex counseling, special sexual problem areas. Attitude reassessment workshop. Registration fee: $800. Contact: Institute for Sex Research—Summer Program, 416 Morrison Hall, Indiana University, Bloomington, Ind 47401.

INTERNATIONAL BREAST CANCER CONFERENCE, Lucerne, Switzerland, Aug 1-4, 1976. 20 hours, Category I, AMA Physician's Recognition Award; 30 cognates, American College of Obstetricians and Gynecologists. Contact: Physicians Associated for Continuing Education, Suite 208 Uptown Federal Bldg, 6609 Reisterstown, Rd, Baltimore, Md 21215.

SOUTHERN OBSTETRIC AND GYNECOLOGIC SEMINAR, INC, Great Smokies Hilton, Asheville, NC, Jul 18-23, 1976. Welcoming cocktail party Sunday afternoon. Symposium on human sexuality featuring Dr. and Mrs. Jim Semmens, Drs. Tom Wise and Jon Meyer of Johns Hopkins, and Dr. Robert Greenblatt of Augusta, Ga. Annual cocktail party and banquet. Golf tournament. Contact: Dr. JS Lancaster, 805 E 32nd St, Austin 78705.

For other courses and symposiums, see Continuing Education Courses, pp 29-30.

JULY

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Mescalero, NM, Jul 19-22, 1976. Box 456, Sunland Park, NM 88063.

AMERICAN ASSOCIATION FOR REHABILITATION THERAPY, INC, Cleveland, Jul 12-16, 1976. Box 93, N Little Rock, Ark 72116.

AMERICAN CANCER SOCIETY, COLORADO DIVISION, Denver, Jul 16-17, 1976. 1809 E 18th Ave, Denver 80218.

AMERICAN SOCIETY OF ORAL SURGEONS, Chicago, Jul 17-18, 1976. 211 E Chicago Ave, Ste 930, Chicago 60611.

INDIANA UNIVERSITY, Institute for Sex Research, Inc, Bloomington, Ind, Jul 21-30, 1976. 416 Morrison Hall, Indiana University, Bloomington, Ind 47401.

INSTITUTE FOR CONTINUING EDUCATION, Heidelberg/Mainz/Hamburg, W Germany, Jul 13-24, 1976. 2405 Westwood Ave, Box 11083, Richmond, Va 23230.

INTERNATIONAL UROLOGY CONGRESS, Johannesburg, South Africa, Jul 25-30, 1976. c/o Festivals & Conventions Trust (Pty) Ltd, Box 61326, Marshalltown, 2107 Transvaal, Rep of South Africa.

INTERNATIONAL CONGRESS OF HYPNOSIS AND PSYCHOSOMATIC MEDICINE, Philadelphia, Jul 1-3, 1976. Dr. Martin T Orne, The Institute of Pennsylvania Hospital, 111 N 49th St, Philadelphia 19139.

ROCKY MOUNTAIN CANCER CONFERENCE, Denver, Colo, Jul 23-24, 1976. 1764 Gilpin St, Denver, Colo 80210.

SOUTHERN OBSTETRIC AND GYNECOLOGIC SEMINAR, INC, Asheville, NC, Jul 18-23, 1976. Dr. JS Lancaster, 805 E 32nd St, Austin 78705.

■ TEXAS REHABILITATION ASSOCIATION, Dallas, Jul 11-14, 1976. Box 20040, Dallas 75220.

AUGUST

■ AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, Houston, Aug 1-6, 1976. 1725 K St, NW, Washington, DC 20006.

AMERICAN ASSOCIATION OF FOUNDATIONS FOR MEDICAL CARE, Boston, Aug 7-12, 1976. Box 230, Stockton, Calif 95201.

■ AMERICAN PODIATRY ASSOCIATION, Dallas, Aug 12-17, 1976. 20 Chevy Chase Circle, NW, Washington, DC 20015.

■ AMERICAN SOCIETY OF PARASITOLOGISTS, San Antonio, Aug 22-27, 1976. UT Health Science Center at Dallas, Dallas 75235.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 8-13, 1976. 1818 Gaylord St, Denver 80206.

INTERNATIONAL DOCTORS IN ALCOHOLICS ANONYMOUS, Los Angeles, Aug 5-8, 1976. Sec, IDAA, 1950 Volney, Youngstown, Ohio 44511.

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION, Tokyo, Aug 22-28, 1976. c/o Japan Medical Women's Association, 19 Kawadacho, Ichigayan, Shinjuku-ku Tokyo.

TRANSPLANTATION SOCIETY, New York, Aug 22-28, 1976. Felix T Rapaport, New York University Medical Center, 560 First Ave (Room H-438), New York 10016.

SEPTEMBER

AMERICAN ACADEMY FOR CEREBRAL PALSY, Los Angeles, Sep 12-16, 1976. 1255 New Hampshire Ave NW, Room 1030, Washington, DC 20036.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Boston, Sep 20-23, 1976. 1740 W 92nd St, Kansas City, Mo 64114.

■ AMERICAN ACADEMY OF MEDICAL ADMINISTRATORS, Dallas, Sep 19-20, 1976. 6 Beacon St, Boston 02108.

AMERICAN CANCER SOCIETY-NATIONAL CANCER INSTITUTE, St. Louis, Sep 20-22, 1976. Dr. Sidney L Arje, American Cancer Society, 777 Third Ave, New York 10017.

AMERICAN COUNCIL OF MEDICAL STAFFS, New Orleans, Sep 24, 1976. 3422 Bienville St, New Orleans 70119.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Dearborn, Mich, Sep 30-Oct 2, 1976. 4137 Erie St, Willoughby, Ohio 44094.

AMERICAN FRACTURE ASSOCIATION, Acapulco, Mexico, Sep 5-10, 1976. Box 10202, Atlanta 30319.

■ AMERICAN HOSPITAL ASSOCIATION, Dallas, Sep 20-23, 1976. 840 N Lake Shore Dr, Chicago 60611.

AMERICAN PSYCHIATRIC ASSOCIATION, Atlanta, Sep 19-23, 1976. 1700 18th St, NW, Washington, DC 20009.

AMERICAN ROENTGEN RAY SOCIETY, Washington, DC, Sep 18-25, 1976. 20 N Wacker Dr, Chicago 60606.

AMERICAN SOCIETY OF PLASTIC & RECONSTRUCTIVE SURGEONS, Boston, Sep 26-Oct 1, 1976. 29 E Madison St, Ste 807, Chicago 60602.

NATIONAL ASSOCIATION OF NEIGHBORHOOD HEALTH CENTERS, INC, Atlanta, Sep 20-24, 1976. 1625 I St, NW, Ste 403, Washington, DC 20006.

SOCIETY FOR PEDIATRIC RADIOLOGY, Washington, DC, Sep 19-20, 1976. c/o Johns Hopkins Hospital, Baltimore 21205.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Sep 17-19, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS PEDIATRIC SOCIETY, Dallas, Sep 23-25. 1976. Mary E Greene, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES, Houston, Sep 29-Oct 1, 1976. Drs. Sergio Henao and Mae F McMillan, 1300 Moursund Ave, Houston 77030.

OCTOBER

AMERICAN ACADEMY OF PEDIATRICS, Washington, DC, Oct 18-23, 1976. 5320 Pine Ridge Ave, Cheyenne, Wyo 82001.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct 31-Nov 5, 1976. 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tuscon, Ariz, Oct 3-6, 1976. Box 912, DTS, Omaha 68101.

AMERICAN BOARD OF FAMILY PRACTICE, Certification examination, Seven cities throughout the US, Oct 30-31, 1976. Dr. Nicholas J Pisacano, Exec Dir-Sec, University of Kentucky Medical Center, Lexington, Ky 40506.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Atlanta, Oct 24-28, 1976. 911 Busse Highway, Park Ridge, Ill 60068.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, New Orleans, Oct 12-14, 1976. 241 E Saginaw, E Lansing, Mich 48823.

AMERICAN COLLEGE OF GASTROENTEROLOGY, Montreal, Oct 24-30, 1976. 299 Broadway, New York 10007.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct 11-15, 1976. 55 E Erie St, Chicago 60611.

AMERICAN GROUP PRACTICE ASSOCIATION, Bal Harbour, Fla, Oct 5-9, 1976. 20 S Quaker Lane, Alexandria, Va 22313.

AMERICAN MEDICAL ASSOCIATION AUXILIARY, Chicago, October, 1976. 535 N Dearborn St, Chicago, 60610.

■ AMERICAN MEDICAL TENNIS ASSOCIATION, Austin, Lakeway World of Tennis, Oct 16-23, 1976. Box 13, Alton, Ill 62002.

AMERICAN MEDICAL WRITERS ASSOCIATION, Detroit, Oct 6-10, 1976. 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, New Orleans, Oct 7-10, 1976. Box 708, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, San Francisco, Oct 9-13, 1976. 515 Busse Hwy, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Los Angeles, Oct 15-22, 1976. 2100 W Harrison St, Chicago 60612.

■ AMERICAN SOCIETY FOR MICROBIOLOGY, Austin, Oct 6-8, 1976. 1913 I St, NW, Washington, DC 20006.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Washington, DC, Oct 11-13, 1976. 200 Berkeley St, Boston 02117.

■ ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, San Antonio, Oct 31-Nov 4, 1976. 10605 Concord St, Kensington, Md 20795.

GERONTOLOGICAL SOCIETY, New York, Oct 13-17, 1976. 1 Dupont Circle, Ste 520, Washington, DC 20036.

INTERNATIONAL ACADEMY OF PATHOLOGY, Washington, DC, Oct 17-23, 1976. c/o Dept of Pathology, University of Indiana Medical Center, Indianapolis 46202.

INTERNATIONAL ASSOCIATION OF SOCIAL PSYCHIATRY, Yugoslavia, October, 1976. Dr. John J Carleton, 2323 Oak Lane, Santa Barbara, Calif 93105.

INTERNATIONAL CONGRESS OF ALLERGOLOGY, Buenos Aires, October, 1976. Dr. LL Henderson, Sec Gen, Mayo Clinic, Rochester, Minn 55901.

INTERNATIONAL FEDERATION OF GYNECOLOGY & OBSTETRICS, Mexico City, October, 1976. Av Baja California 317-301, Mexico 11 DF.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 2, 1976. Box 3276, Amarillo 79106.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Dallas, Oct 17-19, 1976. Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

NOVEMBER

AMERICAN ACADEMY OF MAXILLOFACIAL PROSTHETICS, San Diego, Calif, Nov 8-10, 1976. 110 S Jerge Dr, Elma, NY 14059.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Newton, Mass, Nov 8-12, 1976. 430 N Michigan Ave, Chicago 60611.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tucson, Ariz, Nov 28-Dec 2, 1976. Box 912, Omaha 68101.

AMERICAN BOARD OF PATHOLOGY, Chicago, Nov 18-20, 1976. 1820 Exchange Natl Bank Bldg, 610 N Florida Ave, Tampa, Fla 33602.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN HEART ASSOCIATION, Miami Beach, Fla, Nov 15-19, 1976. 44 E 23rd St, New York 10010.

■ AMERICAN SOCIETY OF CYTOLOGY, Houston, Nov 3-6, 1976. Dr. Warren R Lang, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 1006, Philadelphia 19107.

■ MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Houston, Nov 11-12, 1976. Stephen C Stuyck or Dr. Margaret Davis, MD Anderson Hospital and Tumor Institute, Houston 77030.

MEDICAL SOCIETY OF THE STATE OF NEW YORK, New York, Nov 7-11, 1976. 420 Lakeville Rd, Lake Success, NY 11040.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Guadalajara, Mexico, November, 1976. c/o Virginia Bryant, 333 W Thomas Rd, Phoenix, Ariz 85013.

MEDICAL SOCIETY OF VIRGINIA, Williamsburg, Va, Nov 4-7, 1976. 4205 Dover Rd, Richmond, Va 23221.

NATIONAL ASSOCIATION FOR MENTAL HEALTH, Philadelphia, Nov 16-19, 1976. 1800 N Kent St, Arlington, Va 22209.

NATIONAL EYE RESEARCH FOUNDATION, Las Vegas, Nev, Nov 7-11, 1976. 18 S Michigan Ave, Chicago 60603.

NATIONAL KIDNEY FOUNDATION, Washington, DC, Nov 17-21, 1976. 116 E 27th St, New York 10016.

NEW YORK STATE SOCIETY OF DERMATOLOGY, New York, Nov 8, 1976. 420 Lexington Ave, Ste 443, New York 10017.

NEW YORK STATE SOCIETY OF INTERNAL MEDICINE, New York, Nov 10, 1976. 420 Lexington Ave, Ste 443, New York 10017.

PAN AMERICAN ASSOCIATION OF OTO-RHINO-LARYNGOLOGY AND BRONCHOESOPHAGOLOGY, New Orleans, Nov 7-11, 1976. 10921 Wilshire Blvd, Los Angeles 90024.

PENNSYLVANIA MEDICAL SOCIETY, Hershey, Pa, Nov 3-5, 1976. 20 Erford Rd, Lemoyne, Pa 17043.

PUERTO RICO MEDICAL ASSOCIATION, Santurce, PR, Nov 16-20, 1976. 1305 Fernandez Juncos Ave, Box 9387, Santurce, PR 00908.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov 28-Dec 3, 1976. 1 MONY Plaza, 15th Floor, Syracuse, NY 13202.

SOUTHERN MEDICAL ASSOCIATION, New Orleans, Nov 8-11, 1976. 2601 Highland Ave, Birmingham, Ala 35205.

■ **TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Nov 6-7, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.**

DECEMBER

AMERICAN MEDICAL ASSOCIATION, Philadelphia, Dec 4-8, 1976. 535 N Dearborn St, Chicago 60610.

AMERICAN SOCIETY OF HEMATOLOGY, Boston, Dec 3-5, 1976. Dr. Thomas Bradley, Sec, Veterans Administration Hospital, 4150 Clement St, San Francisco 94121.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nev, Dec 12-16, 1976. 1516 N Lake Shore Dr, Chicago 60610.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 2-4, 1976. Dr. Reuben H Adams, Pres, 3630 Noble Ave, Dallas 75204.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Puerto Vallarta, Mexico, Nov 10-13, 1976. Mrs. Virginia E Bryant, Exec Sec, 333 W Thomas Rd, Suite 207, Phoenix, Ariz 85013.

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Adjunctive treatment of life-threatening emergencies with oxygen under high pressure

Donald F. McDonald, MD

When combined with conventional methods of treatment, administration of oxygen at high pressure is useful adjunctive therapy which may improve results in patients with air embolus, carbon monoxide poisoning, and gas gangrene. Facilities and trained medical teams are readily available at many military bases and medical centers (Fig 1). Prompt recognition of these special life-threatening emergencies, and prompt treatment with appropriate conventional therapies and with hyperbaric oxygen, may save lives and reduce sequelae.

Air Embolism

Air embolus may develop at the time of injuries to, or surgery on, the head, neck, heart, or lungs; as an accident of intravenous therapy or venesection; during air insufflation, as in retroperitoneal air study; pneumothorax; pneumoperitoneum; Rubin's test of tubal patency; at the time of hemodialysis for renal failure; and following blast injury to the lungs. Diving accidents resulting in inappropriate rates of ascent lead to bubble formation with resultant air embolism. High-altitude aircraft accidents that subject the crew to rapid decompression may result in air embolism.

Typical symptoms of venous air embolism consist of substernal pain, dyspnea, and syncope. Findings include dyspnea, cyanosis, cardiovascular collapse, and the typical "mill wheel" murmur of right ventricular contraction on air bubbles. Conventional treatment includes placing the patient in the left lateral position (right side up) described by Durant.[1] With the patient supine or with the left side up, the air obstructs the right ventricular outflow tract. In the Durant position, the air trap is relieved as the right ventricle churns the bubble into froth and pumps it into the pulmonary arteries. Closed-chest resuscitation should be employed as necessary. Oxygen administered through a tight-fitting face mask, intravenous administration of dexamethasone to combat cerebral edema, and intravenous administration of heparin and dextran to enhance the microcirculation are conventional useful treatment modalities. Aspiration of the air bubble from the right ventricle may be attempted. These conventional methods of treatment reduce the mortality rate from 93% to 33%.[2]

Administration of 100% oxygen at high pressure in a decompression chamber can improve the results of conventional treatment. In a series of nine patients who re-

1. Hyperbaric chambers in Texas.

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ceived 200 to 500 ml of intravenous air during extracorporeal hemodialysis, Baskin and Wozniak[3] reported no deaths, despite the delay of three hours in treatment of one patient. Eight patients had a pronounced relief of symptoms in 10 minutes at 6 atmospheres (atm). Early symptomatic improvement at 6 atm is caused by a decrease in bubble size to 20% of the volume and 55% of the diameter at 1 atm. Breathing oxygen at 6 atm is not advisable because oxygen at that pressure is toxic. Once the symptoms have abated with the patient breathing air at 6 atm, the pressure can be lowered to 3 atm. At this pressure, 100% oxygen can be safely administered using a tight-fitting face mask, which gives 97% oxygen in the nostril. Breathing 100% oxygen rapidly lowers the amount of dissolved nitrogen in the serum and thereby effects a large gradient that favors solution of the nitrogen, which constitutes 79% of the gas in the bubble. In addition, oxygen breathing reduces cerebral edema, increases oxygenation of tissues, and improves blood flow.

A typical hyperbaric treatment for air embolism, regardless of cause, would consist of rapid compression to 6 atm, air breathing for 15 minutes during which time symptoms are relieved, ascent to 2.8 atm, 40 minutes of breathing 100% oxygen, 30 minutes of gradual ascent to 2 atm while breathing oxygen, 30 minutes at 2 atm of which 10 minutes are spent breathing air to reduce likelihood of oxygen toxicity, and 30-minute ascent to atmospheric pressure while breathing oxygen. Total time is two hours and 34 minutes. Repeated hyperbaric oxygen treatment is seldom necessary, for one treatment removes the bubbles. If treatment has been delayed, a longer period of compression and oxygen breathing may be necessary.[4,5]

When should a patient who has symptoms and findings of air embolism be treated with hyperbaric oxygen? Any time such a patient fails to obtain complete, prompt, symptomatic and objective improvement in response to the conventional methods, he should be considered a candidate for hyperbaric treatment. He should be transported promptly by surface transportation, low-flying helicopter, or pressurized plane to a hyperbaric treatment facility. After how long a delay is hyperbaric treatment of no avail? Although results of hyperbaric treatment are more prompt and complete when given early, pronounced improvement is often experienced even after treatment delays of three hours. In one instance, unexpectedly good, but not complete, improvement in central nervous system symptoms were observed 28 hours after accidental air embolism from venesection in a patient with an intraventricular septal defect.[6]

Carbon Monoxide

Carbon monoxide poisoning resulting from inhalation of coal or natural gas fumes from space heaters, and exhaust from internal combustion engines may cause death by anoxia. Hemoglobin is made unavailable for oxygen transport by the formation of carboxyhemoglobin. Carbon monoxide has an affinity for hemoglobin 250 times greater than oxygen. The dissociation curve of oxyhemoglobin is shifted to the left, that is, oxygen is more firmly bound to hemoglobin, the gradient is increased, and the level of tissue oxygen is rendered dangerously low. In addition, carbon monoxide appears to have a direct myocardial toxicity demonstrable by electrocardiogram in patients with carboxyhemoglobin levels exceeding 25%.

The symptoms of carbon monoxide intoxication are headache, confusion, and disorientation ending in coma. The "cherry red lips" of classical carbon monoxide poisoning are seldom seen. The early manifestations of tachycardia, hyperactive tendon reflexes with clonus, and positive Babinski signs are replaced by tachypnea resulting from acidosis, fixed pupils, areflexia, coma, and failure to respond to painful stimuli. Cardiovascular collapse is rare.

Emergency treatment of a patient suspected of carbon monoxide poisoning includes removal of the victim from the source of poisoning, administration of 100% oxygen by tight-fitting face mask, and immediate transportation to a hospital where hyperbaric treatment is available. If carboxyhemoglobin values are below 25% and the victim has no central nervous system symptoms except for headache, 100% oxygen by face mask will be definitive therapy. If the carboxyhemoglobin value exceeds 25% or if the patient has central nervous system symptoms, hyperbaric oxygen treatment is indicated.

The advantages of oxygen under high pressure are several: Breathing 100% oxygen at 3 atm immediately corrects the hypoxia because of increased dissolved oxygen in the plasma. Second, the time to eliminate half of the carbon monoxide in the blood is reduced. The half elimination time at 1 atm is 80 minutes, whereas at 3 atm it is 23 minutes.[4] Untreated patients with carboxyhemoglobin levels of 66% or greater do not survive. Treatment with hyperbaric oxygen has cured victims with 80% carboxyhemoglobin. In addition, ECG abnormalities promptly revert to normal during treatment.

A typical hyperbaric oxygen treatment for carbon monoxide poisoning consists of 100% oxygen breathing by tightly fitting face mask at 3 atm for 60 minutes. Longer treatment or repeated treatments may be required if there has been considerable delay or if there is severe cerebral edema.

Sequelae of carbon monoxide poisoning are related to the magnitude of exposure. Myocardial hemorrhages and focal areas of myocardial necrosis are seen in fatal cases. Persistent post-treatment ECG changes indicate the need for bed rest until the ECG becomes normal.[7] Central nervous system damage with permanent impairment of memory and deterioration of personality is more likely to occur in those victims who have more severe impairment of consciousness at first evaluation. Only 12% of 63 patients showed improvement after three years. Most of these patients, however, did not receive intensive treatment.[8]

Gas Gangrene

Adjunctive high pressure oxygen treatment of patients with gas gangrene has been known to be of value for 15 years, but only a fraction of the cases are so treated owing to the lack of knowledge on the part of primary physicians and surgeons. Gas gangrene commonly follows grossly contaminated compound fractures, and presents a painful, swollen, copper-colored extremity with dark red-blue blisters. Cellulitis proximal to the injury may progress rapidly. The patient is febrile, septic, obtunded, hypotensive, and oliguric. There may or may not be crepitus. Hemolysis may be severe with low hematocrit. Gram stains and anaerobic cultures from the wound establish the diagnosis. Supportive treatment for shock, polyvalent antitoxin, tetanus antitoxin, and massive doses of sodium penicillin are customary. Potassium penicillin should be avoided as most patients have hyperkale-

mia. Amputation may not be adequate treatment because it fails to remove all of the damaged tissue. Where the diagnosis of clostridial sepsis is suspected, treatment with oxygen under high pressure should be considered in all patients.

Beneficial effects of oxygen under high pressure include removal of interstitial gas, improved circulation to tissues, and rapid susidence of the edema. The most striking beneficial effect, however, is on the toxicity and fever, which often respond dramatically. Studies in vitro have shown that an oxygen pressure of 250 mm Hg stops the production of alpha toxin by the bacteria. While the subject is breathing 100% oxygen at 3 atm, interstitial oxygen pressure has been found to be 330 mg Hg.[9] In cases of sepsis, high-pressure oxygen treatment given before surgical debridement or amputation makes the patient a better candidate for surgery and may save some limbs.

A typical course of treatment for gas gangrene consists of three 90-minute treatments at 3 atm with 100% oxygen by face mask in the first 24 hours, and four additional similar treatments in the next three days. Usually the patient becomes afebrile and recovers from sepsis by the third treatment. Best survival statistics, up to 100%, attend treatment before 30 hours have elapsed from onset of systemic toxicity. Late treatment when the patient is moribund and in shock has little merit. In a review of 267 cases in the literature, Davis and associates report an overall mortality rate of 23%, with a 9% mortality in those patients considered salvageable at the time of initiating treatment. Whereas amputation in clostridial myonecrosis of extremities is often necessary, nearly one-third of patients were spared loss of limb in Davis' series.[10]

Gangrene of perineal and genital tissues due to anaerobic or mixed infections, sometimes referred to as Fournier's gangrene or necrotizing fasciitis, occurs in the elderly, the diabetic, or in patients with predisposing focal sources of infection such as urethral stricture or perirectal abscess. The patients present with local inflammatory changes which progress to violaceous discoloration, bleb formation, and gangrene. Progressive cellulitis extends the involvement, which may travel to the abdomen or buttocks. A febrile septic course may lead to death in 40% to 70% of patients receiving conventional antibacterial therapy and debridement. Early recognition of the condition, with conventional and hyperbaric oxygen treatment on the gas gangrene schedule, effects cessation of the advancing cellulitis, resolution of the edema, and improvement in the vascularity of the discolored tissues. The area of gangrene will be much diminished and mortality reduced over that customarily seen.[11,12] Early treatment should be given before extensive tissue loss occurs.[13]

Acute Blood Loss Anemia

When massive blood loss or acute hemolytic anemia occurs and blood transfusions are refused or are hazardous, 100% oxygen at 3 atm can provide adequate oxygenation of tissues by increasing the dissolved oxygen in plasma to 6.3 vol % for most organs.[14] In several patients so treated, excellent results were achieved despite their initial hemoglobin levels of 2.2 and 3.0 gm/100 ml.[15,16]

Hyperbaric oxygen treatment is not without risk, but current treatment plans prevent the development of pulmonary and central nervous system oxygen toxicity by limiting the depth at which 100% oxygen

is given to 3 atm or less, and the time to 90 minutes at 3 atm or two hours at 2 atm.. In addition, in compressed air chambers, periods of air breathing are given at 20- to 30-minute intervals to further reduce the pulmonary toxicity of oxygen. If the patient is unable to equalize middle ear pressure when pressure is increased in the chamber, or if he is unconscious, myringotomies are performed to prevent perforations of tympanic membrane. Decompression sickness in physicians attending the patient is prevented by adhering to standard Navy decompression schedules.[10]

Absolute contraindications to hyperbaric oxygen treatments are untreated pneumothorax, acute viremia, spherocytosis, and untreated malignancy. Relative contraindications are bronchospastic disease, acute sinusitis, convulsive disorder, and pregnancy.

It must be emphasized that high pressure oxygen treatment is adjunctive to other standard methods of treatment. It does not replace them. Therefore, before and after hyperbaric oxygen treatments, these patients must be given constant, intensive treatment appropriate to their conditions.

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Dr. McDonald, The University of Texas Medical Branch, Galveston, TX 77550.

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Congestive heart failure in the fetus and during the first day of life

Alvin E. Rodin, MD; Myron M. Nichols, MD

Except in severe cases of hydrops fetalis, congestive heart failure in the fetus and during the first day of life is an uncommon event. The relatively few congenital cardiac anomalies reported with heart failure during the first 24 hours of life include pulmonary atresia with hypoplasia of the right side of the heart,[11] isolated congenital insufficiency of the pulmonary valve,[14] premature closure of the foramen ovale,[10,23] atresia of the aortic valve,[41] and tricuspid anomalies.[28]

We have investigated three cases of heart failure associated with tricuspid insufficiency, two in the first 24 hours after birth and one in a stillborn infant. Two placentae were examined and found to be considerably larger than normal.

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Case Reports

Case 1: This premature male infant was transferred to The University of Texas Medical Branch Hospital at 8 hours of age; cyanosis had begun at age 3 hours. Birth weight was 2,630 gm and length 49 cm. On physical examination a markedly enlarged heart, a single second sound, dyspnea, inspiratory rales, an enlarged liver, and a single umbilical artery were found. Pulmonary atresia was diagnosed at cardiac catheterization. A balloon-septostomy was performed, following which atrial fibrilla-

1. Heart from case 1 opened through the tricuspid valve. Attached at the dilated valve ring are incompletely differentiated leaflets showing irregularly thickened distal edges which are attached to the endocardium by short chordae tendineae. The dilated atrium above contains a fossa ovalis with a large opening created by balloon septostomy on the right, and a small patency on the left.

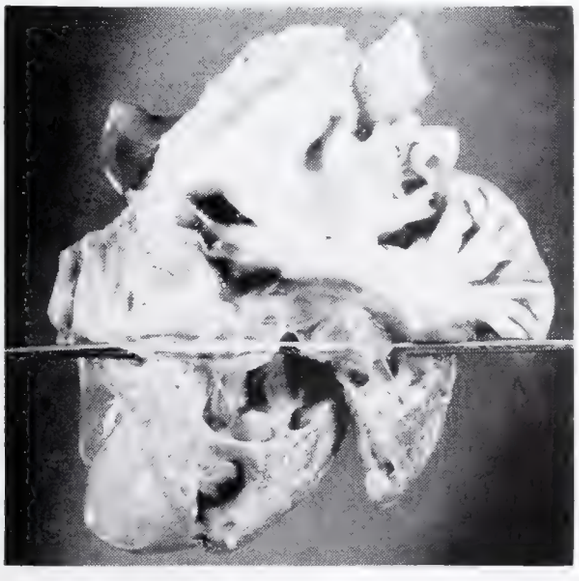
tion developed and the infant died at 17 hours of age. No information was received about the placenta.

At autopsy, the heart was transverse in position, occupying 80% of the transverse thoracic diameter, with the right atrium constituting 50% of the heart. The right atrium was paper thin and the tricuspid ring was dilated (1.6 cm in diameter). The foramen ovale was large, with a tear in the valve flap. The tricuspid valve showed incomplete differentiation of its leaflets with small irregular nodules on the surface (Fig 1), and the leaflets were adherent to the septum. The right ventricle was dilated and hypertrophied. The pulmonary trunk was hypoplastic, measuring only 0.5 cm in diameter. The ductus arteriosus was only 0.3 cm in diameter, and the pulmonary valve was atretic.

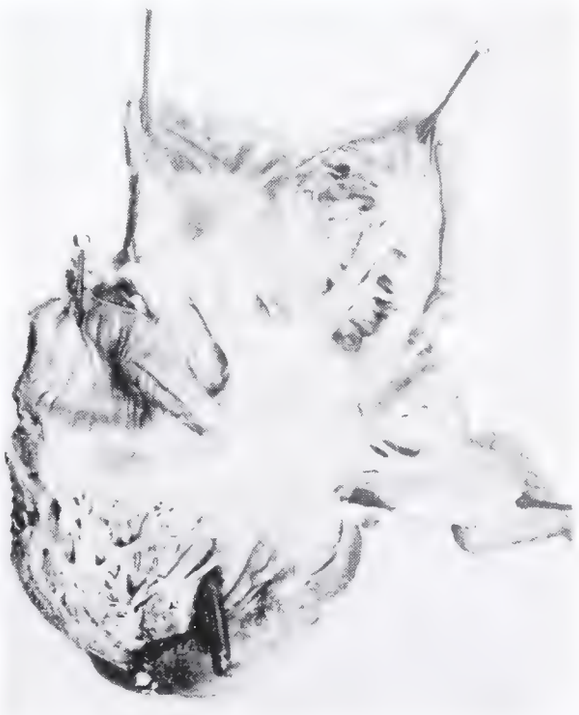
Case 2: This newborn male was delivered after an uncomplicated 36-week pregnancy in a gravida 2, 27-year-old black female. Birth weight was 3,100 gm and length 48.5 cm. At birth, signs of heart failure included respiratory distress, tachycardia, enlarged heart and liver, peripheral edema and ascites. Cardiac catheterization was inconclusive. He was digitalized but died at 32 hours of age.

At autopsy, the heart was 50% above the expected weight. The right atrium was dilated (Fig 2). The tricuspid valve had short but thin chordae tendineae, and the septal leaflet was partly adherent. There were nodularities near the free edge of the leaflets. A moderate degree of endocardial

2. Heart from case 2, opened through the tricuspid valve. There is a suggestion of only two valve leaflets. The right leaflet is adherent to underlying endocardium, barely permitting passage of the probe. The distal margin of the left leaflet has several nodularities and is attached by short chordae tendineae.



3. Heart from case 3 opened through the tricuspid valve. The atrium is hugely dilated. Attached to the dilated tricuspid ring is a leaflet structure which is not differentiated into individual leaflets, is adherent to underlying endocardium, is generally thicker than normal, and is attached to short chordae tendineae. The black probe in the right ventricle is inserted through a ventricular septal defect.



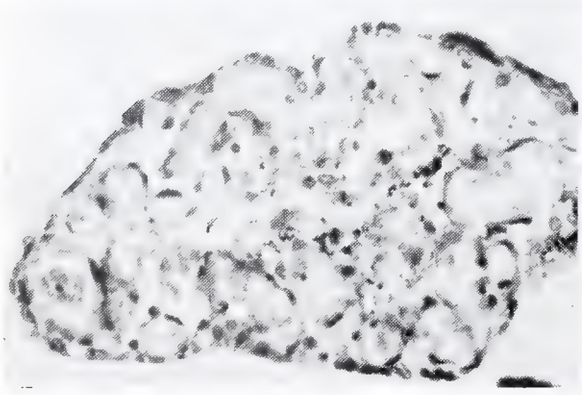
fibroelastosis of the left ventricle was also present.

The placenta weighed 1,270 gm, over twice the normal expected weight. However the fetal, maternal, and cut surfaces were not unusual. Sections of the placenta contained normal villi with an average of four to six capillaries in each. Some congestion was apparent. Marked hypertrophy and hyperplasia of the islets of Langerhans suggested an associated maternal diabetes mellitus.

Case 3: A female stillborn infant weighing 2,930 gm and measuring 48.4 cm in length was delivered after 37 weeks' gestation to a 20-year-old Rh-positive primipara. No other blood group studies were available. In the last trimester of pregnancy, the mother had gained 5.4 kg (12 lb), and albuminuria, edema, and mild hypertension had developed. The fetus had hydrops with generalized subcutaneous edema, ascites, and pleural effusions. The right atrium was dilated and the tricuspid valve was incompletely differentiated (Fig 3). There were nodularities of the leaflets with short chordae tendineae and adherence to the septum. A 3-mm ventricular septal defect in the membranous portion was also present. Nucleated red blood cells were not present in the blood vessels, and the degree of extramedullary hematopoiesis in the liver was consistent with the age and size of the fetus.

The placenta was heavy, weighing 620 gm. Many of the villi were large histologically, and all contained a greatly increased number of vessels, ranging from 10 to 45 (Fig 4). These villal vessels were well demarcated and were filled with non-nucleated red blood cells.

4. Placental villus from case 3. A cross section of this large villus contains at least 30 vessels, as compared to only 4 to 6 normally. X 200.



Discussion

The hearts in these three patients have congenital tricuspid insufficiency with changes described by Becker[7] as tricuspid dysplasia without downward displacement of the valve. In most cases of congenital heart disease, heart failure does not occur before or immediately at birth because communications exist at the atrial or ventricular levels or via the patent ductus arteriosus to provide the pulmonary circulation with enough blood for survival in utero.[29] Rowe[28] has suggested that failure in the neonate with tricuspid regurgitation may result from volume overloading.

Congenital anomalies of the tricuspid valve that may produce heart failure in the first day of life are Ebstein's anomaly,[20] and an unguarded tricuspid valve with a normal orifice between the right atrium and ventricle, but no tricuspid valvular tissue.[17]

Tricuspid regurgitation in the fetus may also result from deformed but normally situated leaflets.[28] The onset of heart failure in tricuspid insufficiency may be delayed until after infancy,[6,13,24] but nine cases of congenital tricuspid insufficiency with failure during the first day of life have been reported.[1,4,2,12,19,27,16] Of these, one was in a stillborn,[1] five were apparent at

birth,[7,19,27,16] and three became evident during the first day of life.[4,19] The age at time of death ranged from five minutes to six months. Four cases also had some irregular development of mitral valve leaflets,[4,27,16] and one each a triple orifice of the inferior vena cava,[2] anomalous position of the atrial septum,[12] hypertrophy of the septal band,[19] and an atrial septal defect.[19] The only patient[19] with significant extracardiac anomalies had Down's syndrome.

Congestive heart failure in the fetus and at birth is not limited to patients with congenital heart disease. In hydrops fetalis due to hemolytic disease of the newborn, anasarca may be the result of heart failure and hypoalbuminemia.[39] Hypervolemia resulting from twin-to-twin placental transfusion,[21] septicemia during or shortly after birth with purulent pericarditis,[37] intrauterine infection with coxsackievirus,[18] and primary isolated endocardial fibroelastosis[35] have been associated with heart failure in the first day of life. Infarcts of the heart are extremely rare in the newborn, but have been reported to cause neonatal heart failure[5] as well as intrauterine atrial tachycardia and flutter.[30,38]

Metabolic disorders causing neonatal heart failure include hyperthyroidism with exophthalmic goiter in infants born of mothers with thyrotoxicosis,[15] neonatal hypoglycemia not associated with maternal diabetes,[3] and neonatal hypocalcemia.[36]

Extracardiac developmental vascular anomalies, acting as arteriovenous shunts, result in increased cardiac output and early cardiac failure. Most of the arteriovenous congenital fistulas reported have been cerebral,[31,33] but a fistula between the subclavian artery and the innominate vein,[40] and another between the epigastric artery and the umbilical vein[22] have been reported. Large hemangiomas of the liver also have been associated with heart failure in the newborn,[9,34] and there has been one report of neonatal cardiac failure with a hemangioendothelioma of the pelvis.[26]

In our stillborn, placentomegaly was consistent with an unusual condition that was called placental hypertrophy by Potter[25] and diffuse chorangiomatosis by Benirschke.[8] The possible relationships between this placental abnormality and heart failure are: (1) They may be coincidental; (2) chorangiomas may act as arteriovenous aneurysms or fistulas in producing cardiomegaly or failure; (3) the volume overloading of the heart may result in dysplastic development of tricuspid leaflets; or (4) fetal cardiac failure may stimulate the proliferation of capillaries within villi.

Summary

Three cases of congenital tricuspid insufficiency with heart failure are reported, one in a fetus and two during the first day of life. Atresia of the pulmonary valve was found in one infant; endocardial fibroelastosis in another. The placenta of the stillborn showed diffuse chorioangiomatosis, suggesting a possible relationship between fetal heart failure and placental changes. Heart failure occurring in the fetus or in the first 24 hours after birth is relatively uncommon and requires a combination of abnormalities to exceed normal compensatory mechanisms; however, tricuspid insufficiency alone may be sufficient.

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Dr. Rodin, Wright State University School of Medicine, Wright State University, Dayton, OH 45431.

From the Departments of Pathology and Pediatrics, The University of Texas Medical Branch, Galveston, TX 77550.

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Cardiac trauma

Ernesto C. Ching, MD

Injuries to the heart, resulting from physical assaults and motor vehicle accidents, are relatively common in our urban society. Most surgeons will be confronted by such injuries at some point in their practice. The usual management ranges from observation with repeated pericardiocentesis for cardiac tamponade to immediate thoracotomy. At the University of Mississippi Medical Center, a moderate approach was maintained over the years, providing general support with pericardiocentesis if signs of pericardial tamponade developed. Nevertheless, immediate thoracotomy was usually performed if two pericardial taps did not provide lasting improvement.[1]

In recent years, reports from several centers showed that better results were obtained with immediate thoracotomy[2-4] and direct repair of the cardiac wound than with nonoperative treatment, which was the standard procedure in managing these lesions before the middle 1950's. The records of 50 consecutive cases from the University of Mississippi Medical Center, treated during the past 16 years, are presented to demonstrate our present approach.

Materials and Methods

Fifty cases of cardiac trauma, treated from 1956 to June 1973, were reviewed and the data are presented. There were 40 males and 10 females, with ages ranging from 4 to 70 years. Forty-two patients were black and eight were white. The majority of cases were encountered in the past five years, accounting for more than seven cases per year.

Discussion: Mortality and Morbidity

There were seven deaths in the series; the 14% mortality approximates the national average.[5-7] The majority of injuries were inflicted by knives (more than 50%), followed in frequency by low-velocity missiles (26%), and the remainder by motor vehicle accidents, shotgun, and ice pick. The higher mortality associated with motor vehicle accidents indicates the effect of multiple injuries (Fig 1).

Mortality is also directly correlated with the blood pressure recorded on admission to the emergency room. All patients with stable blood pressure on admission survived; of 23 patients with borderline blood pressure on admission (systolic 60-90 mm Hg), two died; and of 12 patients admitted with no blood pressure obtainable, 5 died.

Central venous pressure was recorded in 27 of the 50 cases, and we arbitrarily classified the results into three distinct categories: normal to mildly elevated (less than 20 cm H_2O); moderately elevated (20 to 30 cm H_2O); and markedly elevated (greater than 30 cm H_2O). Most deaths were in the "mildly elevated" category; in our series, patients in this category also had systolic blood pressures of less than 60 mm Hg. There were no deaths in the "moderately elevated" group, and only one death in the "markedly elevated" group. The latter was a 4-year-old child whose involvement in a motor vehicle accident resulted in traumatic ventricular septal defect and severe congestive heart failure. We believe that there is an inverse relationship between initial central venous pressure elevation and mortality rate. A low central venous pressure associated with a low blood pressure indicates hypovolemia with low cardiac output. Adequate treatment centers about vigorous volume replacement (Fig 2).

Morbidity (length of hospital stay) ranged from 2 to 29 days, averaging 11.7 days (median, 11 days) for surviving pa-

tients. Complications were many, and fell into two categories: those related to trauma itself, and those related to surgical intervention (Figs 3,4).

The seven deaths in this series were a consequence of the cardiac injury, and all patients were in severe shock when first seen. Two patients, ages 4 and 70, had received multiple injuries in motor vehicle accidents; three had knife wounds and two had bullet wounds. Most deaths were attributed to delayed transfer and inadequate cardiopulmonary resuscitation. One gunshot victim's death was attributed to an error in diagnosis. This 23-year-old man was shot several times in the chest and epigastric region. Bloody nasogastric drainage was obtained in the emergency room, and the central venous pressure was less than 20 cm H_2O. A diagnostic pericardial tap was performed, and blood volume replacement was accomplished with fluids and whole blood. Exploratory celiotomy for suspected esophageal and gastric injury was performed. After the abdomen was closed, cardiac arrest occurred. Immediate thoracotomy released more than 500 cc of blood from the left side of the chest. Clotted blood in the pericardial sac was evacuated, but the heart was empty, and the patient could not be resuscitated.

Other Factors Influencing Survival

Relationship between survival and time elapsed between injury and admission indicated that delay in transport to the medical center accounted for increased mortality in the severely injured patients, but not in those patients who were otherwise in stable condition (Fig 5).

The relationship between time of operative intervention and mortality in this series leads us to pursue a moderately aggressive approach in cardiac trauma, but each case should be handled on an

1. Types of weapons versus mortality.

Type of Weapon	No. Cases	No. Deaths	% Mortality
Knife	28	3	11
Bullet	13	2	15
Motor vehicle accident	5	2	40
Ice Pick	3	0	0
Shotgun	1	0	0
Total	50	7	14

2. Central venous pressure versus mortality rate.

Initial CVP Reading	No. Cases	No. Deaths	% Mortality
<20 cm H_2O	11	3	27
20-30 cm H_2O	10	0	0
>30 cm H_2O	6	1	17
Total	27	4	15

3. Complications secondary to trauma.

Classification	No. Cases
Traumatic mitral valve insufficiency	1
Traumatic aortic insufficiency, mitral insufficiency, aorticopulmonary fistulae, and damage to sinus of Valsalva	1
Traumatic fistulae between aortic root, right atrium, and right ventricle	1
Bullet embolization to systemic artery:	
Right brachial artery	1
Left deep femoral artery	1
Delayed pericardial effusion	2
Pericarditis	2
Associated abdominal injuries:	
Liver	5
Diaphragm	3
Esophagus	1
Kidney	1
Stomach	
Colon	1
Total	21

4. Complications secondary to surgical intervention.

Classification	No. Cases
Serum hepatitis	3
Postoperative bleeding	1
Pulmonary complication, tracheostomy	2
Infection	1
Hemothorax (delayed)	1
Wound dehiscence	1
Anterior myocardial ischemia	1
Exploratory laparotomy, negative	3
Total	13

individual basis as surgical judgment indicates. Results in our series may relate to the nature of the trauma itself, and to the degree of cardiac insult (Fig 6).

The trend toward early thoracotomy and definitive repair is evident in reviewing treatment of heart trauma. From 1956 through 1966, 28% of cases were treated with pericardiocentesis alone, whereas since 1967, only 6% of cases were handled in this manner. The cases since 1967 (2) were treated with tube thoracostomy and observation, and one patient died before cardiac catheterization to document traumatic ventricular septal defect could be performed.

Operative Approach and Findings

In most cases, exploratory surgery was performed through a left thoracotomy; however, in recent years we have also used a median sternotomy with cardiopulmonary bypass standby. As yet, we have not used the pump in an acute situation. The most common injuries found at surgery, aside from cardiac tamponade, were: left ventricular laceration (12 patients); right ventricular laceration (10 patients); coronary artery injury (4 patients); complex lesions or multiple defects (4 patients); right atrial laceration (3 patients); left atrial laceration (2 patients); cardiac contusion (2 patients); inferior vena cava laceration (1 patient); and traumatic ventricular septal defect revealed at autopsy (1 patient). The operative approach is essentially the same as that described by others. Extracorporeal circulation was used three times for elective repair of complex intracardiac lesions as reported earlier by Hardy and associates.[8]

5. Time of admission versus mortality rate.

Time Between Injury & Admission	No. Cases	No. Deaths	% Mortality
<6 hours	42	4	10
6-12 hours	2	1*	50
>12 hours	3	1†	33
Unspecified	3	1	33
Total	50	7	14

* Delayed transport, motor vehicle accident
† Ventricular septal defect, motor vehicle accident

6. Mortality versus time of thoracotomy.

Time Between Admission and Thoracotomy	No. Cases	No. Deaths	% Mortality
Immediate (Emergency room)	15	4	27
Six hours (Urgent)	13	1*	8
Six hours (Elective)	13	0	0
Total	41	5	12

* Misdiagnosis

Other Diagnostic Aids

Pericardiocentesis as a diagnostic and emergency therapeutic aid is invaluable to document cardiac tamponade and injury. In recent years we have used it almost exclusively as an adjunct to eventual thoracotomy and repair. While a positive tap is certainly significant, a negative tap does not rule out cardiac injury and will not deter us from doing an exploratory thoracotomy if other evidence of cardiac injury exists. In our cases, 64% of the patients had pericardiocentesis, with volumes ranging from 10 cc to 250 cc of nonclotted blood; the rest were not recorded, whether because of a negative tap or for other reasons. Reports from other institutions indicate a similar experience with pericardiocentesis. A negative tap is meaningless since the pericardial sac may contain clotted blood, which may be a more serious sign than nonclotted blood. Tube thoracostomy was performed about 50% of the time in this series, but the amount of chest drainage was not indicative of the presence of cardiac injury.

An electrocardiogram is sometimes helpful if the patient's condition is stable, but it is not needed to diagnose cardiac injury. In the present series, 32% of patients showed pericarditis, while 20% of the group having normal ECG's had

cardiac trauma and one such patient died from his injury.

Echocardiography was not used in this series; nevertheless, reports regarding its success in diagnosing cardiac tamponade certainly are encouraging because it is a noninvasive technique and is easily performed by trained personnel. We are anticipating using echocardiography at present, especially as an aid in diagnosing intracardiac injury.

Comments

Cardiac injury is common in our sophisticated society. It could be the result of blunt trauma such as a motor vehicle accident, or of a penetrating injury from a stab wound or gunshot wound or others. It is obviously impossible to explore every chest which has sustained some sort of trauma, but it is imperative that a thoracic surgeon see every patient who has evidence of chest trauma and evaluate the magnitude of the injury. For convenience we may classify these patients into three categories: (1) Those who are obviously in shock and who need immediate resuscitation, including open thoracotomy in the emergency room to stop bleeding and relieve cardiac tamponade; (2) patients who have strong evidence of cardiac injury, such as penetrating injuries of the chest, evidence of cardiac tamponade (Beck's triad), electrocardiographic changes, and increased size of cardiac silhouette seen on chest x-ray (these patients will receive pericardiocentesis besides other resuscitative measures, and the operating room should be alerted for urgent thoracotomy and repair); and (3) patients who obviously are in stable condition with minimal evidence of cardiac tamponade. A trial of pericardiocentesis and chest tube drainage may be indicated here, for these patients may simply have cardiac contusion, and thoracotomy may not be indicated immediately. If patients are brought to the operating room for exploratory laparotomy, the whole chest is prepared and draped at the same time for a thoracotomy. Vigilant monitoring of vital signs, central venous pressure, and chest drainage is vital, and the operator should be alert for indications for immediate thoracotomy. As shown by our statistics, the recent tendency toward earlier thoracotomy undoubtedly has developed because of better-trained thoracic surgeons and anesthesiologists. Immediate resuscitation, including thoracotomy in the emergency room to relieve cardiac tamponade, cannot be overemphasized. To save more lives, early transport to a medical center is definitely needed, but resuscitation must be achieved long before the patient is transferred. It is hoped that with these graded approaches, we can avoid unnecessary thoracotomy and morbidity, and salvage more patients who are obviously in precarious cardiovascular states.

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Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

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Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

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ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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Special therapeutic procedures using intravascular catheters

Amil James Gerlock, Jr., MD

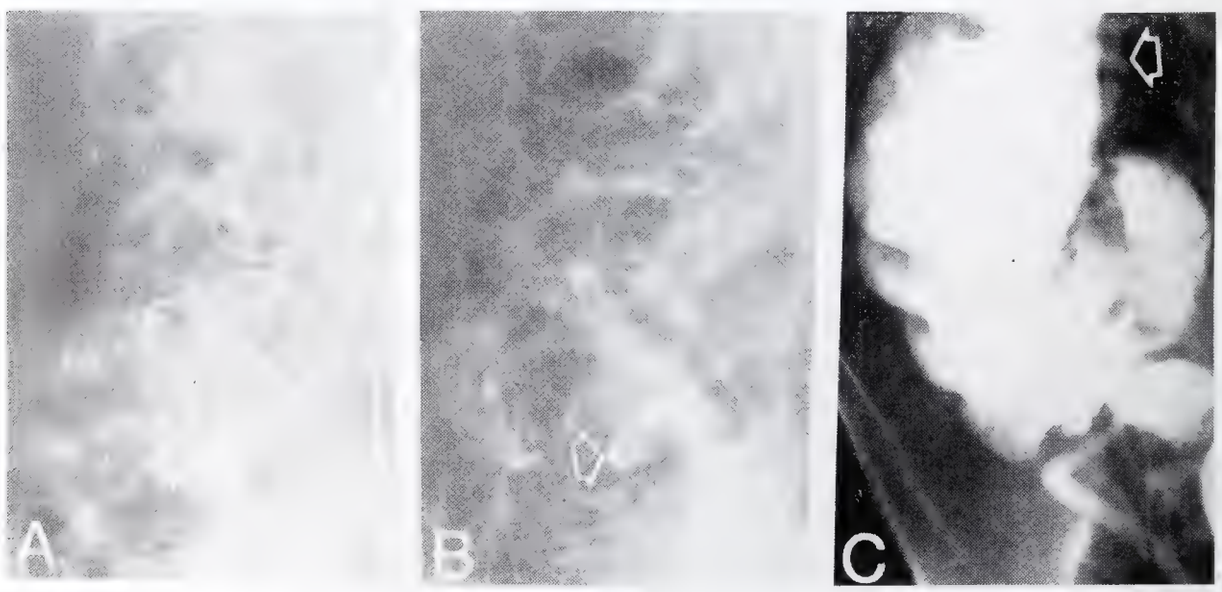
Three major concepts in radiologic special therapeutic procedures include: (1) transcatheter infusion of pharmacologic agents, (2) transcatheter particle embolization, and (3) special catheter instrumentation. A brief example and discussion of each of these methods is presented along with the indications for its use.

Transcatheter Infusion

This method consists of long-term or short-term infusion of pharmacologic agents through a specifically placed intra-arterial catheter. An example of this is the control of massive diverticular hemorrhage by the infusion of a vasoconstrictor drug such as vasopressin through a catheter selectively placed in the mesenteric artery supplying the bleeding diverticulum.[1] The infusion of vasopressin is done immediately following the identification of the bleeding site by angiography. The selective infusion of vasopressin into bleeding arteries or their feeders produces a local vasoconstriction, causing a decreased blood flow through these bleeding vessels. This allows a stable clot to form at the bleeding site and the bleeding stops. Diverticular disease of the colon is the most common cause of massive, acute, lower gastrointestinal hemorrhage.[9,11] Continuation of bleeding in these patients would then be an indication for the use of transcatheter infusion of a vasoconstrictor drug, since the operative mortality for patients having an emergency procedure for massive bleeding may be as high as 30%.[12] To demonstrate the effectiveness of this therapeutic method, Fig 1 (a and b) shows an arteriogram demonstrating a bleeding point in the cecum of a patient who presented with massive lower gastrointestinal tract hemorrhage. This bleeding point in the cecum was controlled immediately by the infusion of vasopressin through an

1a,b. Extravasation of contrast medium from bleeding diverticular disease of the cecum as demonstrated by angiography (arrows) is shown.

c. Shows numerous diverticular projects from the medial border of the barium-filled cecum (arrows).



intra-arterial catheter placed in the superior mesenteric artery (Fig 2). Forty-eight hours after the bleeding was controlled, a barium enema was performed which confirmed that the bleeding seen on angiography was from diverticular disease of the cecum (Fig 1c).

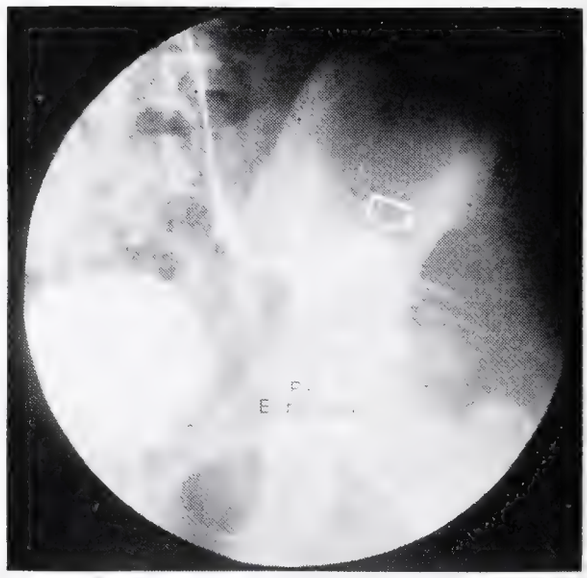
Transcatheter Particle Embolization

This special therapeutic method consists of injecting embolic particles through the intra-arterial catheter in order to obtain specific vessel occlusions. An example of this would be the transcatheter particle embolic occlusion of bleeding vessels (inaccessible by surgery) in the management of pelvic hemorrhage following trauma.[8]

The optimum management of pelvic hemorrhage following trauma to the pelvis remains a difficult and controversial problem. Seavers and associates[16] have recommended hypogastric artery ligation. This procedure may fail even if both hypogastric arteries are ligated, due to the extensive network of collateral blood vessels which is present in and about the soft tissues and musculature of the pelvis.[10,13] Fleming and Bowen[6] advocate early exploration of pelvic hematomas only after the administration of eight units of blood. The risks of surgery are substantial in these patients, and exposure and identification of these bleeding vessels can be extremely difficult. Baylis, Lansing, and Glas[2] performed exploratory laparotomy in 25 patients with retroperitoneal hematoma and found the bleeding site in only one patient. Incising a retroperitoneum which contains a large hematoma can also destroy the tamponade, which may be the only effective force of hemostasis. Ravitch[13] suggests withholding any direct

2. Angiogram of the superior mesenteric artery following the infusion of vasopressin; no bleeding site is present.

3. A subselective injection of contrast medium into the left superior gluteal artery filling several pseudoaneurysms (arrows) is shown.



control of bleeding until 20 units of blood have been administered. This form of treatment may, however, expose the patient to the complications of multiple blood transfusions. Ring and associates[14] advocate the use of angiography early in the management of patients with evidence of continuing blood loss from pelvic trauma. By the use of arteriographic techniques, the bleeding point can not only be localized, but stopped immediately by the use of intra-arterial embolic occlusion of these bleeding vessels. This will not only control pelvic hemorrhage early before massive extraperitoneal hematoma

4. The pseudoaneurysm is obliterated by the transcatheter embolization of Gelfoam.

develops, but may make surgical exploration of the pelvis unnecessary.

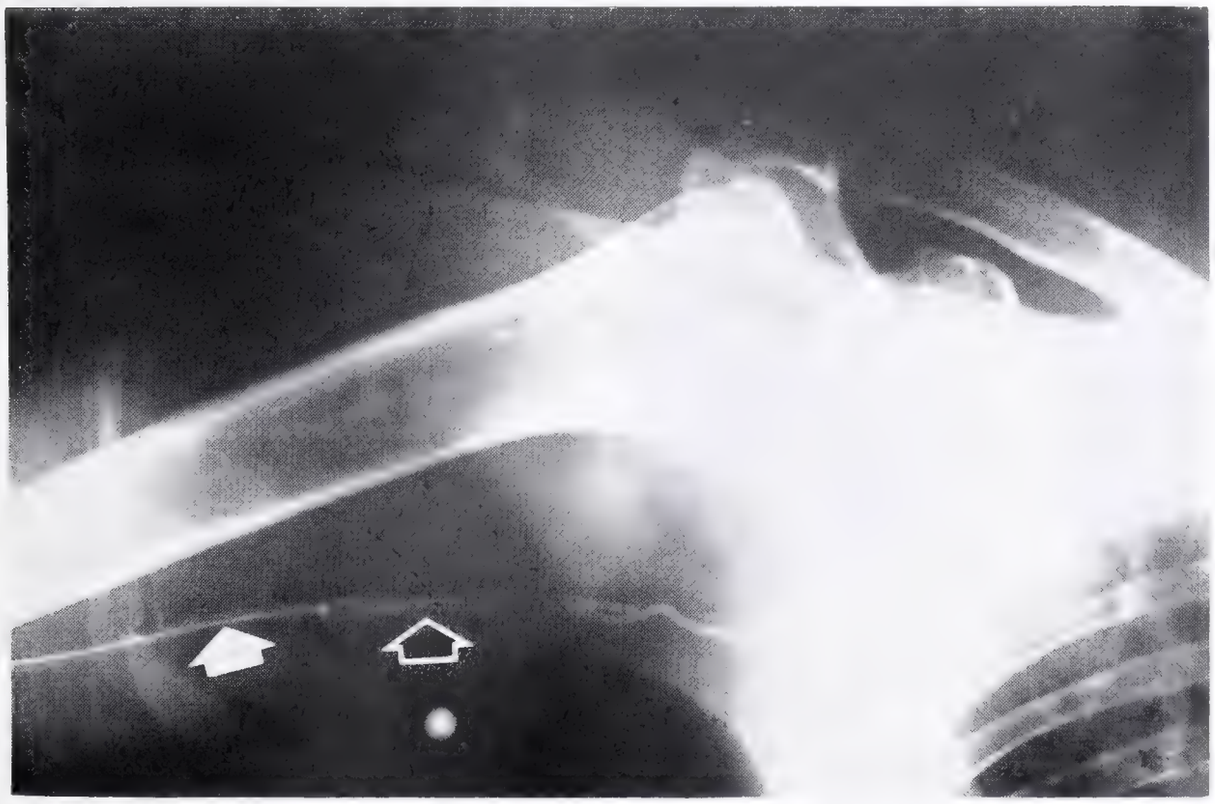
Fig 3 shows multiple pseudoaneurysms of the superior gluteal artery in a patient following a gunshot wound to the pelvis. This patient was oozing blood from the cutaneous wounds about the pelvis. This bleeding subsequently stopped when the pseudoaneurysms of the superior gluteal artery were obliterated by the use of transcatheter intra-arterial embolization of Gelfoam performed immediately after the angiographic diagnosis of these pseudoaneurysms (Fig 4). Transcatheter embolization of bleeding vessels in pelvic trauma can be a useful therapeutic procedure which can make operative procedures unnecessary and prevent complications from massive blood transfusions by reducing blood loss.

Special Catheter Instrumentation Techniques

This method consists of using specially designed vascular catheters which can be placed percutaneously in the lumen of vessels to treat abnormalities which otherwise would require a more invasive surgical procedure, such as a thoracotomy or laparotomy. An example of this method is the percutaneous removal of broken intravenous subclavian catheter fragments which have embolized to the heart and great vessels.

Through 1970, the literature cites at least 100 cases in which broken fragments of intravascular catheters have embolized to the lumen of the heart and great vessels.[5] Bernhardt and associates[3] reviewed 62 cases; removal was not done in 28 of

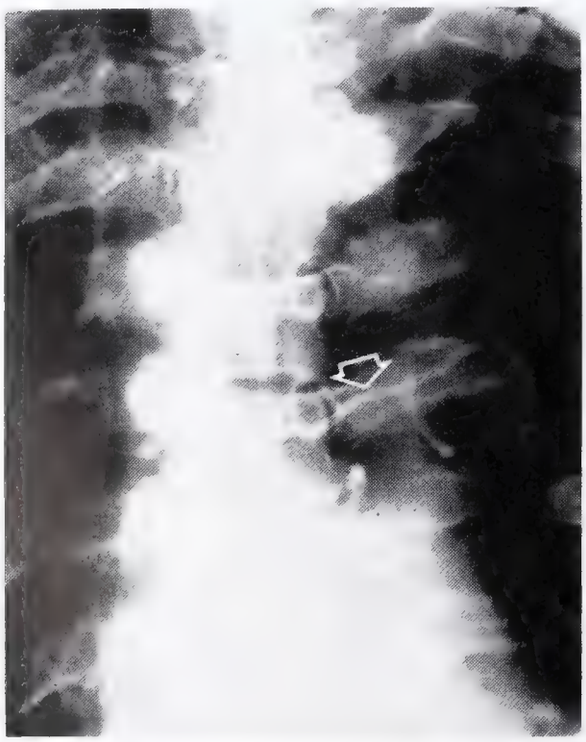
5. The wire loop snare (solid arrow) and retrieved catheter fragment (open arrow) are being withdrawn through the axillary vein.



these cases, and 17 of the patients died of related sepsis, perforation, thrombosis, arrhythmias, or myocardial necrosis. No deaths were reported in any of the 34 cases in which the catheter fragments were removed.

One method for removing these catheter fragments is to place either a wire loop snare[4] or a hook catheter retrieving device[7,15] percutaneously through a needle puncture site in the femoral or axillary artery or vein. The retrieving device is then advanced to the location of the embolized catheter fragment, and once the fragment is grasped, the retrieving device and catheter fragment are withdrawn through the puncture site in the vein or artery. Fig 5 shows the wire loop snare and catheter fragment being withdrawn through the axillary vein. This catheter fragment had been lodged in the left pulmonary artery (Fig 6).

6. An embolized broken subclavian catheter fragment, lodged in the left pulmonary artery (arrow), is shown.



Prompt removal of catheter emboli is nearly always indicated; surgery should be considered only when safer and faster retrieval cannot be effected by transluminal catheterization techniques. These techniques have been used repeatedly without complication.[5]

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Dr. Gerlock, Department of Radiology, The University of Texas Southwestern Medical School, 5323 Harry Hines Blvd, Dallas TX 75235.

Laminectomy for treatment of lumbar disc disease

W. Robert Hudgins, MD

The diagnosis of rupture of a lumbar intervertebral disc cannot always be made preoperatively by examination and myelography, and cannot always be ruled out by pathologic examination of the surgical specimen. Therefore, the accuracy of the final diagnosis depends on the acumen and intellectual honesty of the operating surgeon. Some of the patients who come to operation will be found not to have a symptomatic disc protrusion. The percentage of such cases recognized and reported influences the results of disc operations.

The results of partial hemilaminectomy and disc removal, the standard operation for ruptured lumbar discs over the past 35 years, have been reported many times but always as retrospective surveys. In those reports, variations in criteria for disc removal and for patient selection, both for operation and for subsequent inclusion in the analysis of results, have undoubtedly introduced bias. This article reports a prospective analysis of the results obtained by laminectomy in patients not under the primary care of the author, evaluates some factors that strongly influenced these results, and reviews some recent developments in the management of lumbar disc disease.

One recent development in treatment, that of intradiscal injection of the enzyme chymopapain (chemonucleolysis) is discussed at some length because the data presented here indicate that laminectomy is definitely more effective.

Results of Laminectomy

All patients in this series were under the care of neurologic surgeons at the University of Tennessee Affiliated Hospitals; the author did not have the primary responsibility for any of them. If the operation could not be observed, the surgical findings were obtained personally from the assistant surgeon and classified as closely as possible into one of the following categories: (1) ruptured disc (herniation with or without nerve root compression); (2) degenerated disc (no herniation or nerve compression, but disc soft or fissured); and (3) normal. At the time these operations were done (1966), no cases of spinal stenosis were recognized.

The follow-up data were obtained by questionnaire mailed one year after operation to 278 patients seen consecutively, and 260 (94%) replied. Results were classified into the following categories: (1) excellent (no symptoms, able to perform daily work without limitations); (2) good (intermittent discomfort that did not interfere with work); (3) satisfactory (subjective improvement, but physical activity limited); and (4) poor (condition unimproved or worsened). Fig 1 summarizes the answers to the questionnaires. Ten patients (4%) reported that their condition worsened after laminectomy.

Discussion

Spontaneous Remission

Patients suspected of having a herniated lumbar disc should have an initial period of conservative treatment, unless there is paraparesis, sphincter weakness, or impending footdrop. It has been estimated that only 20% of patients so treated will subsequently require operation.[1] Yet, in 1949 Colonna and Friedenberg[2] reported that, of 28 patients with myelographically

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proved disc hernination treated nonsurgically, only 8 (30%) were free of pain after a mean follow-up of 2.7 years; of the 20 patients whose pain continued, 9 remained disabled. Thus, lumbar disc herniation is not a self-limited disease. And some patients who have spontaneous remission of pain simultaneously develop neurologic deficit due to functional transection of the nerve root. However, if it is to be worthwhile, any therapy for patients with proved disc herniation should relieve more than the 30% of patients who will become asymptomatic through natural healing processes.

Placebo Effect of Laminectomy

Most patients seek treatment for lumbar disc disease because of pain. Any procedure for pain relief may have a placebo effect. Obviously, no one has performed sham operations on patients with proved disc herniation, but the magnitude of the placebo effect of operation can be estimated by examining relief of symptoms in patients whose discs proved to be normal at laminectomy (Fig 1). Half were either completely relieved or had only mild residual pain. Whether this is entirely placebo effect or partly the effect of removal of bone dorsal to the nerve roots (foraminotomy), plus additional bed rest, these results provide a baseline for the evaluation of any specific effect of disc removal.

Results of Laminectomy and Simple Disc Removal

Disc Degeneration: A degenerated disc may be defined as a disc that is soft and fissured but does not produce nerve root compression. It usually is associated with narrowing of the interspace but does not produce a myelographic defect. It often is asymptomatic but may produce back and leg pain. In this series, removal of these discs provided no better relief than did exploration of normal discs, and the relief was not as good as that after removal of herniated discs (Fig 1). Furthermore, when the 32 patients with degenerated discs were matched by age, sex, clinical findings, and type of work with 32 nonsurgically treated patients, there was no significant difference in results (Fig 2).

Operation is not helpful in these patients probably because there is no nerve root compression to be relieved by disc removal. The leg pain is often referred pain due to strain on surrounding spinal ligaments,[1] which is the mechanism thought to produce osteophytes. Leg pain also may be caused by settling of the facets to produce foraminal narrowing or by downward migration of the pedicles to put traction on nerve roots.

Disc Herniation: Herniated discs produce mechanical signs due to disc prolapse, and often also produce neurologic signs due to nerve root compression. At

*1. Summary of results of laminectomy.**

Result	Disc Ruptured No.	%	Disc Degenerated No.	%	Disc Normal No.	%	Total No.	%
Excellent or Good	168	84	11	34	14	50	193	74
Satisfactory	25	12	8	25	1	4	34	13
Poor	7	4	13	41	13	46	33	13
Total	200		32		28		260	

*Based on follow-up questionnaire 1 year postoperatively.

operation there is localized bulging of the annulus, frequently with visible compression of the nerve root and sometimes with partial or complete extrusion of nuclear material. Even so, operation usually is done to relieve pain and the disability resulting from pain, rarely for neurologic deficit. After laminectomy in patients with herniated discs, 84% reported excellent to good results (37% excellent) in this series. Only 4% considered the operation a failure (Fig 1). Unfortunately, a diagnosis of herniated disc cannot always be made preoperatively, and the failure rate after laminectomy in a large group of patients inevitably will be greater.

Main Factors Influencing Results

Patient Selection: Pain has two components, one involving its initiation (physiogenic pain) and the other having to do with its appreciation (psychogenic pain). Operation is directed toward relief of the former, and therefore will be more successful if the patient has several indicators of physiogenic pain. Some of these indicators are more predictive of a disc herniation than is myelography—for example, crossed referral of pain on straight-leg-raising of the "well" leg, absence of ankle jerk, or weakness of the big toe extensor.[3] A defect on the myelogram is significant when it is present but is not always necessary for diagnosis.

The diagnosis of disc herniation is less likely if the patient has strong indicators of psychogenic pain. Even in patients with herniations, strong psychogenic overlay can prevent relief of disability after operation. The best indicators of psychogenic pain are listed in Fig 3.

The effect of disability compensation on results of laminectomy has been examined in this same series of 260 patients.[5] The patients were matched by age, sex, physical findings, and myelographic abnormalities so that only one patient of each pair had compensation. Of the 73 compensation patients, only 10 reported complete relief and 14 were unimproved by laminectomy; whereas, of the 73 control patients without compensation, 31 reported complete relief and only 4 were unimproved. One year after operation, all of the control patients were working, but 17 (25%) of the compensation patients were not working.

Type of Operation Done: The combined operation of disc removal and spinal fusion has no advantage, as a routine procedure, over disc removal alone.[6] Furthermore, after the combined operation there is no difference in results between patients who obtained solid fusion and those who developed pseudoarthrosis. Indications for spinal fusion include spondylolisthesis (either developmental or degenerative), the crumpled neural

2. Results of removal of degenerated discs compared with nonsurgical treatment in matched control patients.

Result	Patients (No.) Surgical	Nonsurgical
Excellent	1	0
Good	10	12
Satisfactory	8	13
Poor	13	7
Total	32	32

*3. Psychologic profile in chronic low back pain.**

1. "Neurotic triad" on MMPI testing
2. Limited formal education
3. Vague onset of pain
4. Unmet dependency needs
5. History of somatic disorders
6. Family model of chronic disease
7. Compensation or a helping spouse

*Adapted from Gentry, et al.[4]

arch syndrome,[7] and spinal instability after failed laminectomy.

Wide bilateral laminectomy for decompression of the cauda equina is recommended in patients with congenital or acquired narrowing of the midsagittal diameter of the lumbar canal—so-called lumbar stenosis.[8] Disc removal alone will not relieve this condition.

Patients with foraminal entrapment syndromes due to bulbous superior articular processes, osteoarthritic facet joints, or bony overgrowth from previous fusions require lateral facetectomy and foraminotomy for nerve root decompression, instead of or in addition to disc removal. These bony abnormalities are sometimes seen only in axial tomograms of the spinal column.[9]

Operative Technique: The technical skill of the surgeon, assuming he has had more than preceptorial training, probably has less influence on results than does proper selection of patients and procedures. However, experience is an important factor: in one extensive study[6] the results were decidedly better when operations were performed by one of the more experienced surgeons. Although most failures of laminectomy seem to be due to errors in judgment or diagnosis, a certain number result from lack of technical skill, and no surgeon should venture into the spinal canal unless he can deal with any lesion he might encounter or has ready access to someone who can.

4. Comparison of results of treatment of herniated lumbar discs by laminectomy and by chemonucleolysis.

Results	Laminectomy No.	Laminectomy %	Chemonucleolysis No.	Chemonucleolysis %
Excellent	74	37	108	34
Good	94	47	111	35
Fair	25	12	38	12
Failed	7	4	60	19
Total	200		317	

Complications

In both the United States and Europe, the mortality for laminectomy and disc removal by neurosurgeons has been consistently reported at about 0.2%.[10] Semmes[11] reported 6,000 operations performed under local anesthesia without a death. Other complications include wound infection (1%), "discitis" (0.5%), and footdrop (0.3%). Paraplegia or sphincter paralysis is rare; neither occurred in one series of 1,176 operations.[10]

Comparison to Chemonucleolysis

More than 6,000 patients have now been treated by intradiscal injections of the enzyme chymopapain (chemonucleolysis) and initially the procedure appeared to be as effective and as safe as laminectomy.[12] However, patient selection has a strong effect on results, and so far no controlled study has been done to compare the two methods on randomly selected patients having similar signs and symptoms.* Watts and associates[13] reported the most detailed comparison of chemonucleolysis and laminectomy to date. In patients with clear-cut signs of disc herniation, laminectomy and disc removal gave significantly better results. This seems logical because enzyme injected into the center of a disc might not come in contact with loose fragments in the spinal canal.

Wiltse and coworkers [14] evaluated relief

*Since the presentation of this report, the results of a double-blind study ordered by the Food and Drug Administration have shown no difference between intradiscal injection of chymopapain and diluent alone, and this enzyme preparation has been recalled.

of symptoms after chemonucleolysis by using categories almost identical to those in this report. Both myelography and discography were used routinely. They "... virtually never injected chymopapain for degenerative disc disease only ..." and "... a fairly normal appearing disc by discogram was never injected ..." It seems that these patients are comparable to those reported here who had laminectomy with removal of herniated discs; Fig 4 compares these two groups of patients. Relief was significantly better after laminectomy, confirming the results of Watts and coworkers.[13] Furthermore, after chemonucleolysis, only 52% of patients reported optimal relief within four months and 12% did not obtain optimal relief until after a year, which raises the question of whether this relief was due to placebo effect plus natural healing processes.

Summary

Results of 260 consecutive operations for suspected herniated lumbar disc were evaluated for relief of pain and disability. Surgical findings were: ruptured disc in 200 patients, degenerated disc in 32, and normal disc in 28. In 74% of the patients, pain relief was either complete or sufficient to permit return to work; in 13% it was less, and in 13% pain was not relieved. Of the 200 patients with herniated discs, 84% returned to previous work and only 3% were not improved. Because patient selection strongly influences results, the roles of physical signs, psychologic profiles, and disability compensation are discussed. In comparable cases, results of laminectomy are superior to results of chemonucleolysis with chymopapain.

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Dr. Hudgins, Dallas Neurosurgical Association, Suite 310, Baylor Medical Plaza, 3600 Gaston Ave, Dallas, TX 75246.

Chronic active hepatitis associated with cholangiocarcinoma

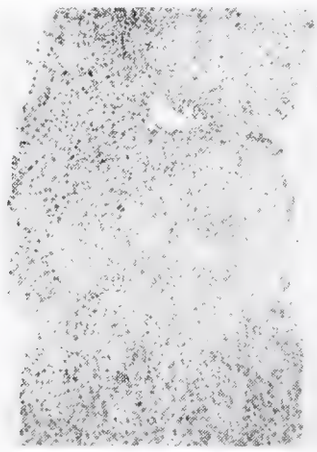
Carlos Lamar, Jr., MD; Carl T. Nichols, MD

Chronic active hepatitis is a syndrome characterized by active inflammatory liver disease persisting more than six months and, if untreated, usually leading to cirrhosis. Chronic active hepatitis may be difficult to identify. A combination of clinical, serological, and biochemical determinations may be helpful, but microscopic examination of liver biopsy material often provides the only reliable means of making a definite diagnosis.

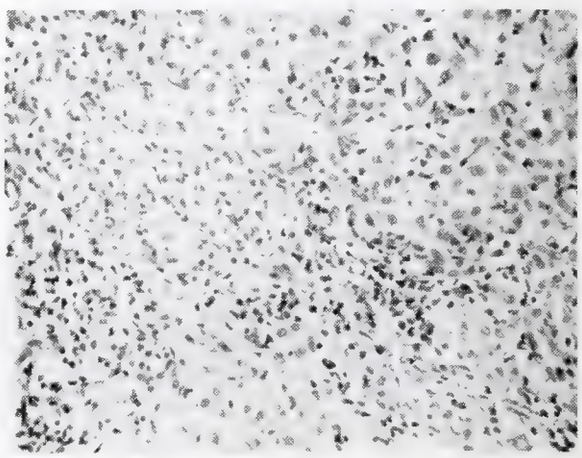
In 1951, Kunkel and associates[1] and later Bearn and associates[2] called attention to this syndrome in 26 patients, predominately female, with high serum gamma globulin levels, increased numbers of plasma cells in the hepatic infiltrates, and often symptoms and signs of a systemic disease. Joske and King[3] found lupus erythematosus cells in the serum of patients with this syndrome, and the term "lupoid hepatitis" was suggested. Mackay and coworkers[4] and Bartholomew and associates[5] considered the possibility that the liver involvement in this syndrome was related to the basic process of disseminated lupus erythematosus. Subsequent reports have defined the serological and pathological features of chronic active hepatitis more precisely[6,7] and suggest that treatment is effective.[8-11] The origin of chronic active hepatitis is obscure. The observation that hepatitis-B antigen (HB_sAg) persists in the serum of some patients who develop chronic active hepatitis suggests that it may have a causal relationship to viral hepatitis.[12,13]

Joske and King[3] suggested that since lupus erythematosus cells may occur in association with abnormal antibodies, the lupus erythematosus phenomenon in chronic active hepatitis may represent a self-perpetuating antigen-antibody disturbance with the liver as a target organ. They postulated that a viral or other injury to the liver might cause hepatic cell modification, leading to a lack of proper recognition of these cells by the immune mechanism with antiliver cell antibody production. Mackay and associates[4] suggested that excessive production of such antibodies could lead to splenomegaly, hypergamma globulinemia, arthralgias, hemolytic anemia, and glomerulitis. Cholangiocar-

1. A scanning view of liver biopsy. There is an inflammatory process throughout the liver parenchyma which involves some lobules to a greater extent than others. The terminal plate is destroyed and overrun by the infiltrate.



2. High-power view of the inflammatory exudate showing that the inflammatory cells consist of mononuclear cells, some polymorphonuclear leukocytes, and a significant number of plasma cells.



cinoma of the liver may have initiated chronic active hepatitis in the following case.

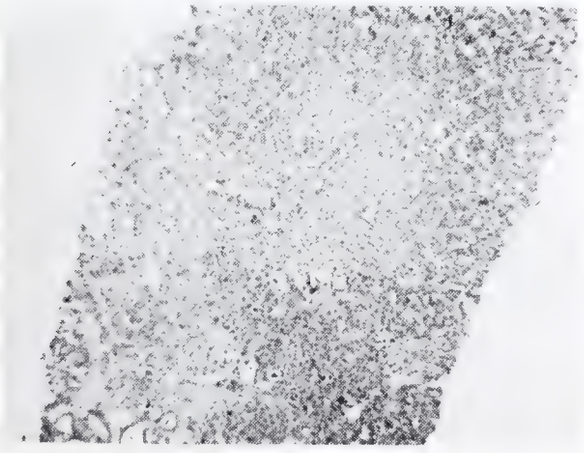
Case Report

A 45-year-old white housewife was admitted to the Amarillo High Plains Baptist Hospital on Oct 6, 1972, following three months of fatigue, weakness, and anorexia, and two weeks of low-grade fever. She used alcohol sparingly and denied previous injections, transfusions, exposure to known hepatitis, or the use of medications or drugs.

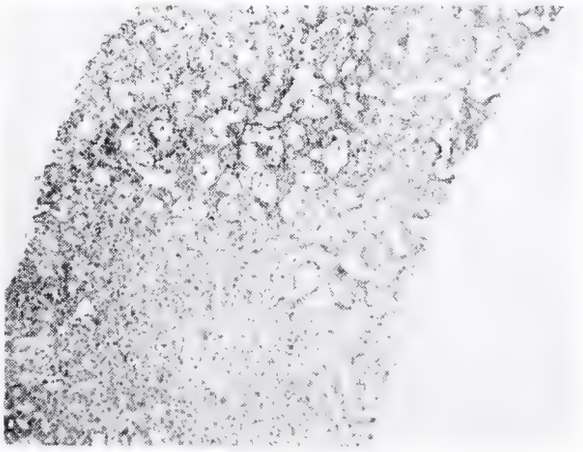
Physical examination showed no abnormalities other than moderate abdominal tenderness, mild hepatomegaly, and mild generalized muscle weakness.

Laboratory work disclosed a normal complete blood count and urinalysis findings. The sedimentation rate was 42 mm, total serum bilirubin value was 2.5 mg/100 ml, SGOT value was 143 IU, and the alkaline phosphatase level was elevated to 40 Bessey-Lowry units (normal 0.8 to 4.8). The test for HB_sAg was negative, the prothrombin time was normal, and the gamma globulin levels were normal. Radiological examination of the stomach, small intestine, and gallbladder disclosed no abnormalities. A liver biopsy specimen showed a generalized inflammatory exudate of variable intensity, but more severe in the portal areas (Fig 1). The limiting plate is overrun by the infiltrate which extends throughout several lobules. On higher power (Fig 2) the inflammatory cell population consists of mononuclear cells, some polymorphonuclear cells, and a significant number of plasma cells. A diagnosis of chronic active hepatitis was made and the patient was treated with prednisone and azathioprine, resulting in improved strength and sense of well being, and a decrease in the serum bilirubin level. One month later the patient felt somewhat better, although she still was weak. Two months after discharge the bilirubin and SGOT levels were normal, but the alkaline phosphatase value continued to be greatly elevated. One month later, the patient noted scleral icterus and abdominal distention, and she was rehospitalized. Additional physical findings were jaundice and ascites. The SGOT value was 41 IU, the alkaline phosphatase level was 22 Bessey-Lowry units, the bilirubin level was 12 mg/100 ml, and the total protein value was 6.5 gm/100 ml. The prothrombin time was normal. The HB_sAg was nonreactive. A repeat liver biopsy specimen (Fig 3) showed absence of the previously described cellular infiltrate and no fibrosis, but in one area (Fig 4) the liver cells were replaced by a mass of duct-like structures consistent with a cholangiocarcinoma. Exploratory

3. Low-power view of the second liver biopsy done three months after the initial one, and after prednisone and azathioprine therapy. The previously conspicuous infiltrate is absent, indicating an improvement in the disease process. In the upper right hand corner, an unusual cell type can be noted and Fig 4 shows an extension of this area of the biopsy.



4. Low-power view of the second liver biopsy showing disarrayed growth of a mass of tissue forming duct-like structures, compatible with differentiated cholangiocarcinoma of the liver.



laparotomy revealed cholangiocarcinoma involving much of the liver, and the patient died two days later.

Discussion

The diagnosis and treatment of chronic active hepatitis has been delineated.[10] The challenge now lies in discovering the etiology. This report adds to the accumulating evidence that in susceptible persons, agents which damage the liver may initiate a series of events that may lead to chronic active hepatitis.

Viral hepatitis was incriminated early as a precipitating factor,[13] and perhaps 20% of the cases are preceded by this infection. This form of hepatitis may occur in association with Wilson's disease,[15] halothane hepatitis,[16] or the use of Dialose, Plus[17] a laxative formerly containing oxyphenisatin. Recently, chronic active hepatitis has been associated with chronic alcoholism.[18] We postulate that in the present case, the disease was initiated by an underlying, initially occult, cholangiocarcinoma which led to the development of antiliver cell antibodies.

Evidence is accumulating that the susceptible population may be genetically predetermined,[19] since certain histocompatibility antigens are frequently found in patients with chronic active hepatitis.

Eddleston and Williams[20] postulate that a genetic predisposition allows prolonged HB_sAg antigenemia with continued production of antibodies which may also react with the liver cell or its components. We suggest that in the present case, the carcinoma either produced some antigenic material similar to the hepatocyte lipoprotein, or that it caused hepatic cell damage with release of some antigenic substance.

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Dr. Lamar, Chief, Medical Service, Veterans Administration Hospital, 109 Bee St, Charleston, SC 29403.

Dr. Nichols, High Plains Baptist Hospital, Amarillo, TX 79106.

The medical malpractice insurance crisis in Texas

The professional liability insurance crisis in Texas is adversely affecting the availability and the cost of health care services for patients. This statement has been documented by the Texas Medical Association through a survey conducted under the direction of the TMA Committee on Professional Insurance. Survey results indicate that one of every two Texas private physicians responding to the questionnaire have reduced the scope of their practice as a result of the malpractice climate. Also among the major findings of the survey are that (1) malpractice suits in the state have quadrupled since 1971, and (2) the amounts awarded by juries have risen 500% in the same period. The following is a condensed version of the final survey report which was presented to the Texas Medical Professional Liability Study Commission on March 19, 1976.

For more than a year, the Texas Medical Association has characterized the Texas medical professional liability insurance situation as a "crisis," while others have failed to recognize the problem's serious consequences. A solution to the professional liability insurance crisis in Texas will be delayed until the diverse vested interests and the public are convinced that a crisis exists.

Admittedly, the dearth of national and Texas statistics has inhibited objective analysis. Affected parties have not worked together to determine fundamental causes or to solve the problem.

TMA has known for some time that the number of medical malpractice suits and claims has been increasing dramatically. TMA has also recognized that the medical malpractice insurance crisis is more than the inability of physicians, hospitals, and other providers to purchase insurance at reasonable rates. The crisis has affected patterns of medical practice, the inflation rate of medical care prices, the performance of experienced medical personnel, and in many instances, the availability of medical care. The lack of documentation of such facts has served as a stumbling block or a convenient excuse for inaction in Texas.

In consultation with the Texas Medical Professional Liability Study Commission, created by the 64th Texas Legislature, TMA surveyed its members during the last four months of 1975 to determine the depth and dimensions of the Texas crisis. The survey report documents the gravity of the problem and provides conclusive evidence that Texans ultimately will bear the burden if current trends are not reversed and an equitable solution found. Indeed, the crisis already is adversely affecting the cost and availability of medical care in Texas.

This presentation is divided into four sections:

(1) Profile of Texas physicians and their medical practices;

(2) Profile of the malpractice insurance carried by Texas physicians;

(3) Reasons for the medical malpractice insurance crisis in Texas; and

(4) Impact of the medical malpractice insurance crisis in Texas on physicians and the public.

PROFILE OF TEXAS PHYSICIANS AND THEIR MEDICAL PRACTICES

Six characteristics were chosen in order to establish a professional profile: specialty, major professional activity, medical school attended, specialty board certification, and age. Based on the data from the professional profile, it appears that the survey respondents are fairly representative of the TMA membership and the physician population of Texas. Medical practice characteristics chosen were: hours worked, weeks worked, patient visits, and medical practice expenses.

Professional characteristics

Specialty. Eleven individual specialties accounted for 75.5% of all survey respondents. These 11 specialties also represent a wide spectrum of medical and surgical activities and the full range of risk classifications utilized by the insurance companies. For all survey respondents, 24% were in family practice, 21% were in the medical specialties, 35% were in the surgical specialties and 20% were in the other specialties.

Major professional activity. Of those responding, 93.9% were in private practice (solo, partnership or group); 5.6% were in non-patient care (medical teaching, administration, research, other); and 0.5% were not classified by major professional activity. Of those in private practice, 56% were in solo practice; 23% were in partnerships; and 21% were in group practice.

Medical school attended. Of those responding to the survey, 51% were graduates of Texas medical schools; 39% were graduates of other U S medical schools; and 10% were graduates of foreign medical schools.

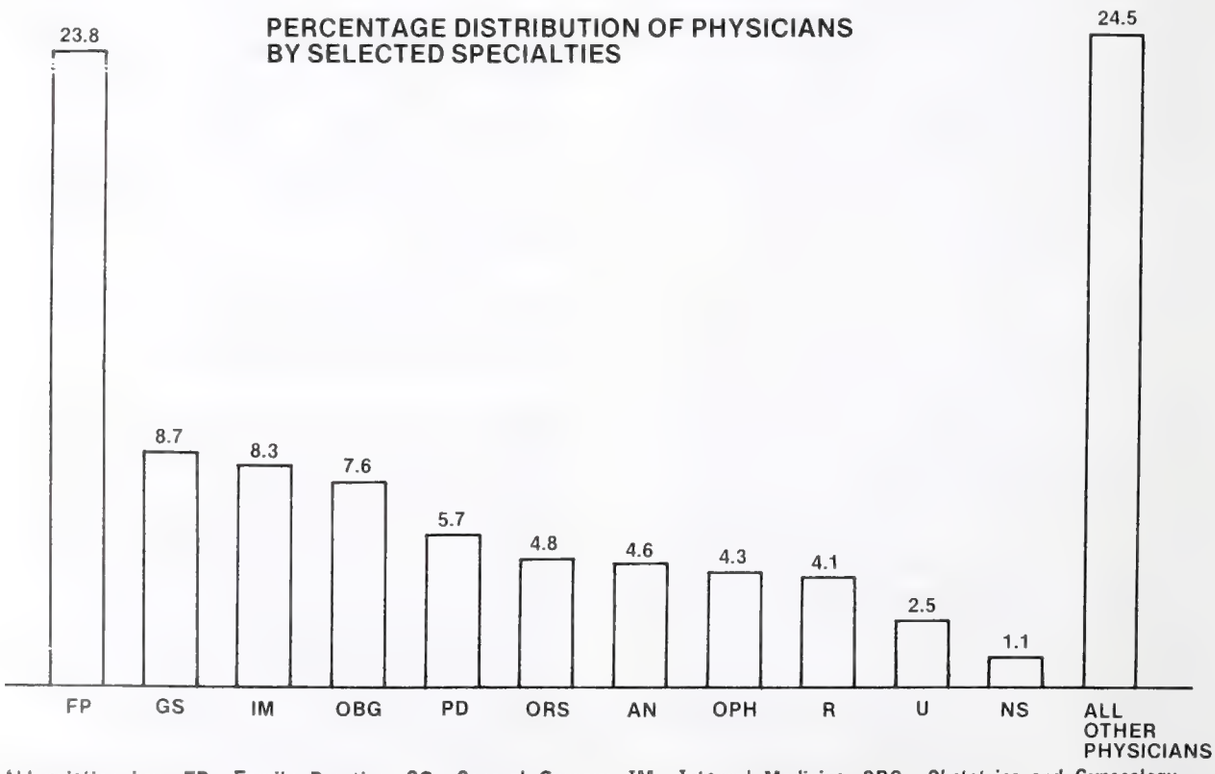
Specialty Board Certification. Currently there are 20 primary and two conjoint boards granting certificates. These 22 specialty boards confer 32 types of "general certificates" and 33 types of "special certificates" in a total of 65 areas of medical practice. While the specific requirements for certification vary from board to board, in general, four to seven years beyond medical school are necessary to complete the graduate training and examination requirements. By major specialty group, 23% of the family physicians, 66% of the medical specialists, 75% of the surgical specialists, and 70% of the other specialists were board certified.

Age. Twenty-two percent of the respondents were under 40; 32.5% were 40-49; 28.3% were 50-59; 13.9% were 60-69; 2.4% were 70-79; and 0.2% were 80 and over. The median age of all physicians was 48.5 years.

Medical practice characteristics

Hours worked per week and weeks worked per year. In addition to the hours spent in direct patient care, physicians are spending increasing amounts of time in the ad-

PERCENTAGE DISTRIBUTION OF PHYSICIANS BY SELECTED SPECIALTIES



Abbreviation key: FP—Family Practice, GS—General Surgery, IM—Internal Medicine, OBG—Obstetrics and Gynecology, PD—Pediatrics, ORS—Orthopedic Surgery, AN—Anesthesiology, R—Radiology, U—Urological Surgery, NS—Neurological Surgery.

ministration of their practice, particularly in preparing insurance forms and updating patient records. For all physicians, an average of 59 hours per week and 49 weeks per year was spent practicing medicine. From the data presented, it appears that Texas physicians cannot significantly increase practice revenue to meet medical practice expenses, including their malpractice premium, by working more hours per week or weeks per year.

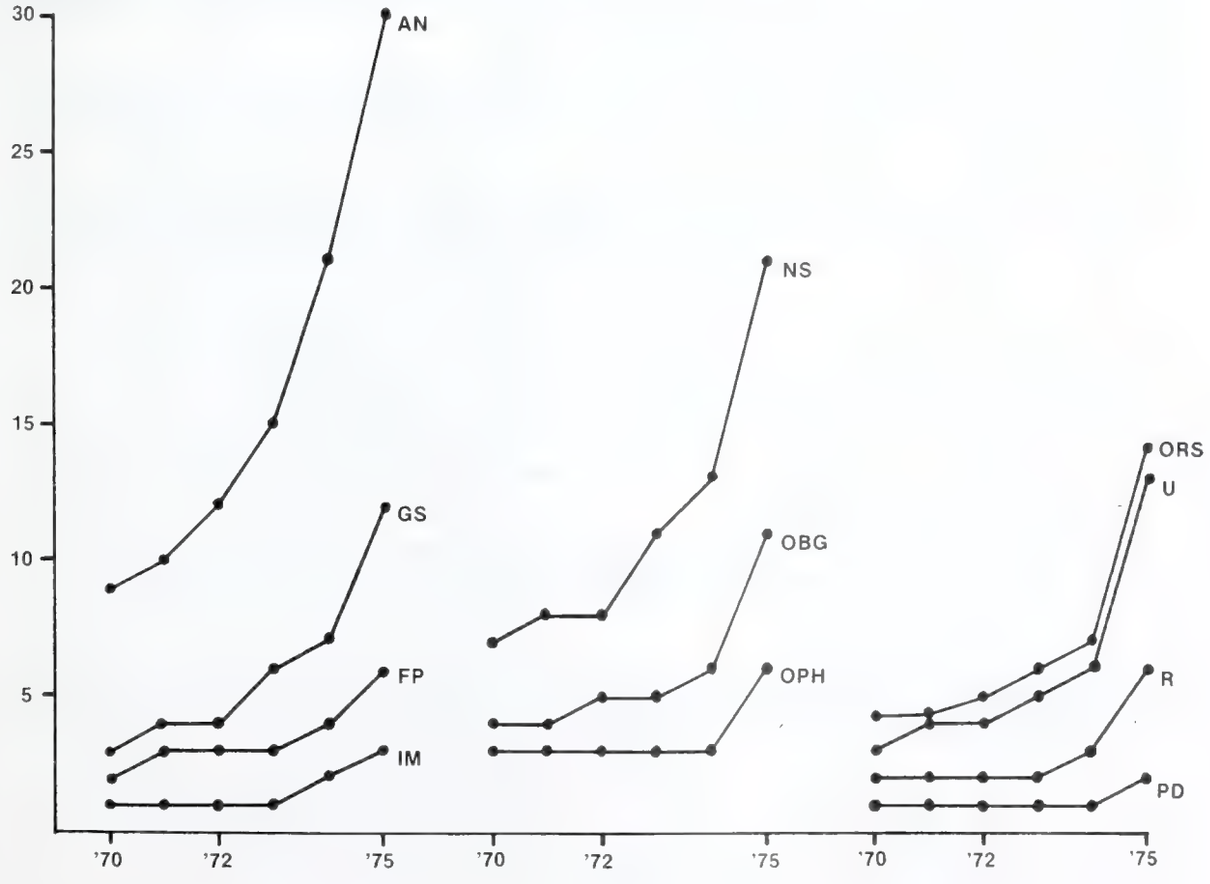
Patient visits per week and per year. Caution should be exercised in interpreting the data on patient visits due to the variation in the type of medical or surgical activities performed by physicians. Generally, the higher risk specialties—obstetrics/gynecology (137 visits per week), orthopedic surgery (135), neurosurgery (103), anesthesiology (103)—have fewer patient visits than do family physicians (191) or pediatricians (161).

Medical practice expenses. One aspect of medical practice which is generally not given adequate consideration is the significant level of expenditures required to operate a medical practice. Most physicians must maintain an office complete with appropriate numbers and types of allied health personnel, equipment (medical and clerical), drugs, disposable supplies, etc. For 1975, average practice expenses ranged from $56,090 for orthopedic surgeons to $18,716 for psychiatrists. Operating costs rose sharply between 1970 and 1975, ranging from a 37% increase for radiologists and urologists, to 100% for anesthesiologists, to 125% for neurosurgeons.

Impact of malpractice premium on medical practice expenses. The rapidly escalating cost of malpractice insurance has contributed to rising medical practice expenses. Survey results indicate that the cost of malpractice insurance has been increasing at a rate greater than other practice expenses and has accounted for

PREMIUM PERCENTAGE OF PRACTICE EXPENSES

PROFESSIONAL LIABILITY INSURANCE PREMIUM AS A PERCENT OF MEDICAL PRACTICE EXPENSES, 1970-75



75

a higher percentage of all medical practice expenses in recent years.

PROFILE OF MALPRACTICE INSURANCE CARRIED BY TEXAS PHYSICIANS

Aspects of malpractice insurance coverage chosen for the profile were: percent having coverage, reasons for not carrying insurance, extent of coverage, companies writing basic policies, type of policy, and nonrenewal of policies.

Physicians with insurance and amount of coverage

Percentage of physicians with malpractice insurance. While 95% of all physicians had

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REASONS FOR THE MEDICAL MALPRACTICE INSURANCE CRISIS IN TEXAS.

(1) The number of reported suits and claims filed has increased dramatically in a very short period of time, with 60% of all reported suits and claims having been filed between January, 1972, and August, 1975.

(2) 16% of all reported suits and claims were filed during January-August, 1975, a higher percentage than in all years prior to 1965 and in any single year 1965-1973.

(3) The percentage of suits and claims with multiple defendants has increased significantly, from 49.2% of all suits and claims filed prior to 1970 to 64.4% of those filed in 1974.

(4) 28% of the respondents to the survey had experienced a suit or claim at some time during their professional career, as compared with 10.1% in 1956 and 12.4% in 1963.

(5) Such characteristics as medical school attended, board certification, and years in practice seem to have little predictive value as to whether or not a physician has experienced a suit or claim.

(6) 72% of the survey respondents have never had a suit or claim, 20% have had one, 6% have had two, 2% have had three, and 1% have had four or more.

(7) A greater percentage of all suits and claims filed in recent years have been seeking larger amounts of damages with 70% of all reported suits and claims seeking $100,000 and over having been filed since 1972.

(8) 77% of the total reported damages sought have been requested in suits and claims filed since 1972.

(9) 41.7% of all suits and claims with awards were the result of suits and claims filed since 1972.

(10) 54% of all reported dollars awarded have been paid on suits and claims filed since 1972, with 54% of the reported suits and claims filed since 1972 still pending.

(11) Reported suits and claims with awards of $100,000 or more accounted for only 4.6% of all suits and claims with awards, but 48.8% of the dollars paid.

(12) At least through 1972, there is evidence of a trend toward a lower percentage of all suits and claims filed being decided in favor of the physician and a higher percentage being decided in favor of the patient.

coverage at the time of the survey, coverage percentages for selected specialties ranged from 89% of neurosurgeons to 99% of internists. At the time of the survey, 2.5% of the responding physicians did not have coverage because the premium was too high; 1.2% chose not to maintain coverage; 1.1% did not have coverage for other reasons; and 0.5% were unable to obtain coverage at any price.

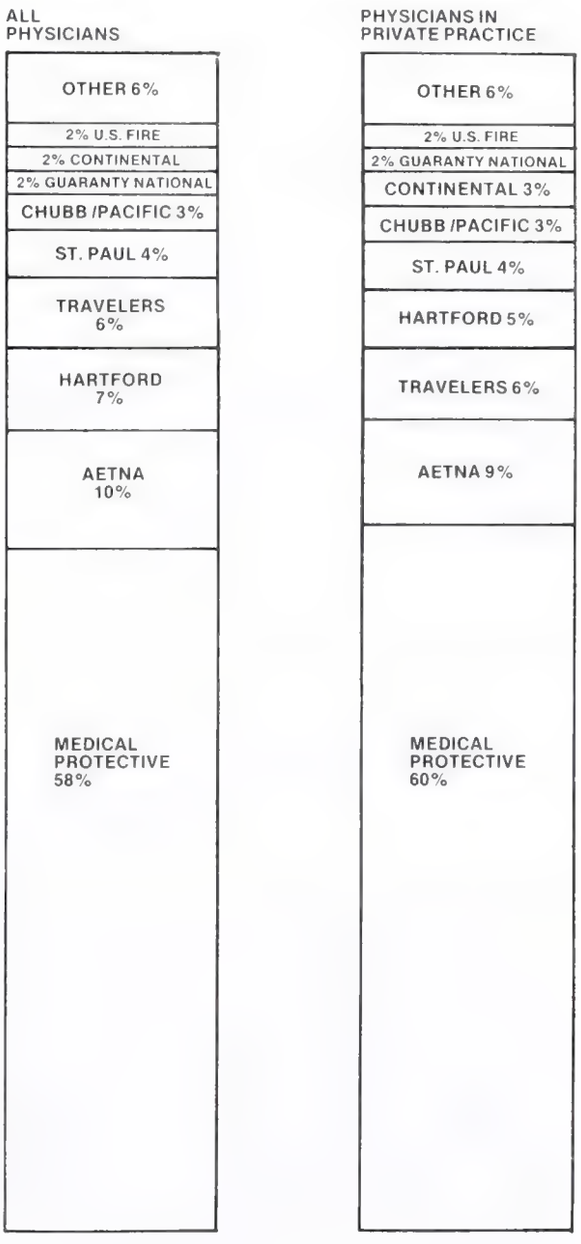
Limits of basic coverage. Basic coverage is written on the basis of specified coverage per suit or claim and aggregate coverage for all suits or claims filed as a result of negligent acts during the policy year. For example, a basic policy of $100,000/$300,000 provides coverage of up to $100,000 for any single suit or claim and a total of $300,000 to cover all suits or claims filed that year.

Five percent of the responding physicians with coverage had less than $100,000/$300,000; 39% had $100,000/$300,000; 44% had $200,000/$600,000; and 12% had greater than $200,000/$600,000. Of the physicians with more than $200,000/$600,000 basic coverage, 31% were covered by Medical Protective.

Umbrella Coverage. A second type of insurance which was available in the policy year preceding the survey was excess or umbrella coverage. Generally this type of coverage picks up at the limits of the basic coverage and is usually written in the amounts of $1,000,000 up to $5,000,000. The percentage of responding physicians in selected specialties who had umbrella coverage increased significantly during the 1970-1973 period, reflecting the belief that higher limits of coverage were needed for protection against the increasing number and severity of suits and claims filed. However, since 1973, the percentage of physicians with umbrella coverage has been declining, particularly in the high risk specialties, for three reasons: (1) the increasing cost of umbrella coverage; (2) the increased limits of basic coverage required (usually to $200,000/$600,000) by the companies to be eligible to purchase an umbrella, which also meant higher costs; and (3) the unavailability of umbrella coverage at any price. It now appears that umbrella coverage is simply not available. The percentage of physicians with umbrella coverage will continue to decline as existing policies expire.

Companies writing basic coverage. At the time of the survey, nine companies were writing 94% of all the basic insurance policies. The other 6% were distributed among 20 other companies. Medical Protective was the single largest carrier, writing 58% of all basic policies and 60% of the basic policies of physicians in private practice.

COMPANIES WRITING BASIC COVERAGE

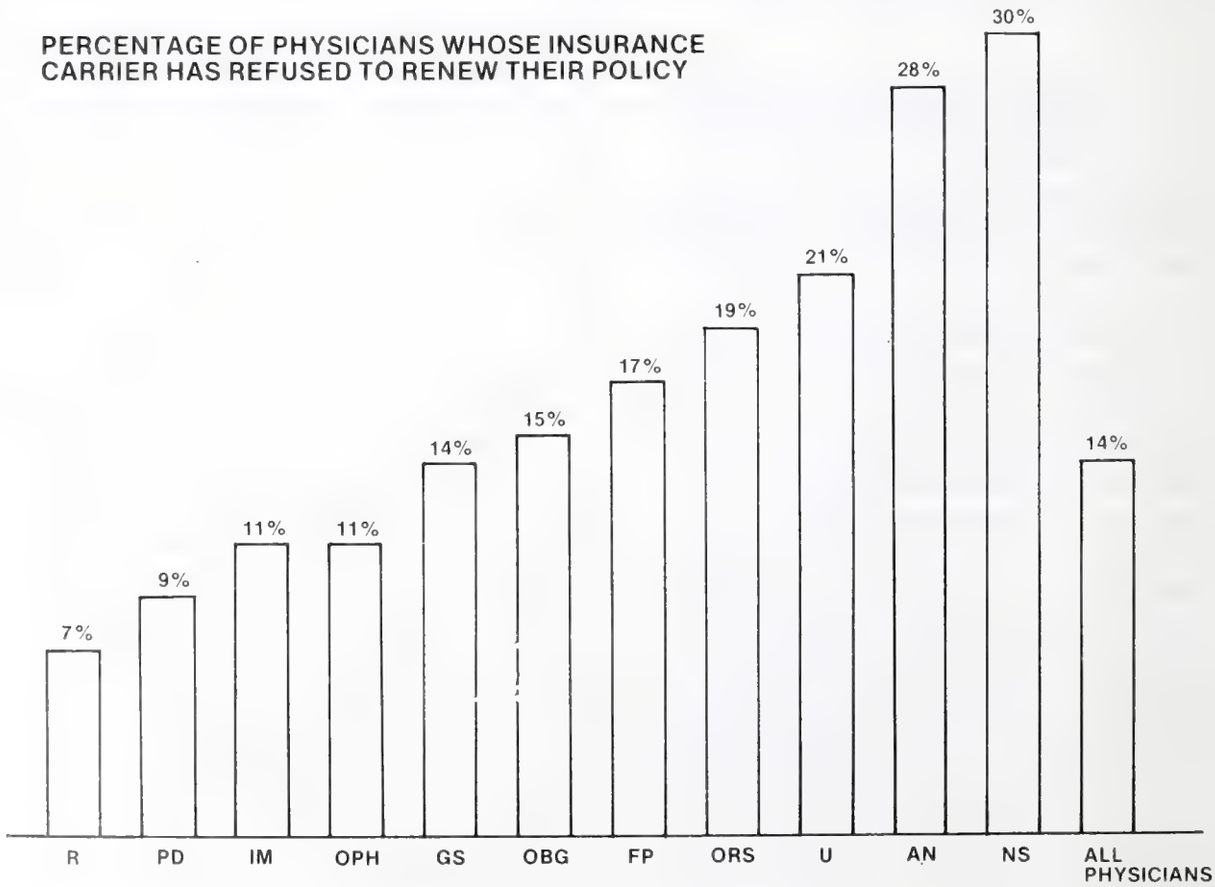


The main differences between the distribution of all policies by company and those for physicians in private practice were evident in the percentages written by Aetna and Hartford. These differences were due to the fact that, at the time of the survey, Aetna was writing a group policy for Baylor College of Medicine and Hartford was writing two group policies, one for the four University of Texas System Medical Schools and one for Texas Tech University School of Medicine. These group policies represented a significant portion of all the policies written by these two companies in Texas during 1975 and accounted for their higher percentages of all policies in comparison with their percentages of policies for physicians in private practice.

Availability of basic coverage in the future to physicians in private practice. The Texas Medical Association has been informed by Aetna (9%) and Hartford (5%) that they plan to cease writing malpractice insurance for physicians in private practice when current policies expire. Whether or not they plan to continue writing the group policies for the medical schools is unknown. Travelers (6%), which was underwriting the Harris County Medical Society program, declined to renew that program in November, 1975, and policies issued through that program will not be renewed when they expire.

St. Paul was writing 4% of the basic policies for private practitioners at the time of the survey. At present, St. Paul is writing only claims-made policies, although they had written occurrence policies previously. As the St. Paul's occurrence policies expire, these physicians will be required to find new sources of coverage if they choose not to accept the claims-made policy.

Of the remaining carriers who were writing a significant percentage of the basic policies for physicians in private practice, Chubb/Pacific (3%), Continental (3%), and US Fire (2%) are admitted carriers and have approved premium schedules from the Texas State Board of Insurance. Guaranty National (2%) is a nonadmitted carrier and is not subject to regulation by the State Board of Insurance. The 20 other companies writing basic coverage for the remaining 6% of the physicians in private



practice with insurance are, in general, companies that do not have approved premium schedules from the State Board of Insurance and generally, these policies will expire in the summer, 1976.

In summary, it appears that 26% to 28% of the physicians in private practice in Texas who had insurance at the time of the survey will be required to find a new source of basic coverage during the 1976 summer months. At the present time, with the exception of the Joint Underwriting Association (created by the 64th Texas Legislature and limited to $300,000 basic coverage), there does not appear to be a viable market for malpractice insurance for this 26% to 28% to Texas physicians. In effect, a serious availability crisis for more than $300,000 basic coverage may be imminent for at least one-fourth of the Texas private practitioners.

Types of basic policies available to physicians in private practice. At the time of the survey, 95% of the basic policies in effect for private practitioners were occurrence policies and 5% were claims-made policies. An occurrence policy covers all future suits or claims arising from negligent acts during the policy year. A claims-made policy covers only those suits or claims arising from negligent acts which are filed during the policy year.

Past refusal of insurance companies to renew policies. While 14% of all physicians had their carrier refuse to renew their policy at some time during their professional career, 30% of the neurosurgeons, 28% of the anesthesiologists, and 21% of the urologists had experienced refusals to renew. Of the total number with refusals, 19% stated that it was due to a suit or claim having been filed; 53% stated that it was because the company was no longer writing in their area; and 29% stated that it was for other reasons.

REASONS FOR THE MEDICAL MALPRACTICE INSURANCE CRISIS IN TEXAS

According to experts in the medical malpractice insurance field, the increasing frequency and severity of suits and claims filed in recent years are the two basic characteristics of the crisis. One indisputable conclusion to be drawn from the TMA survey is that Texas has not escaped the alarming increase in the frequency and severity of suits and claims being filed.

For the purpose of this survey, the following definitions of a suit and claim were used:

Suit—a petition filed in court and a citation actually served charging the physicians with negligence.

Claim—no suit filed in court, but a request for money damages against a physician was investigated and negotiated by attorneys or the insurance carrier.

It is necessary to consider claims and suits because both require an expenditure by the insurance carrier in the physician's defense. In addition, the majority of payments to the patient are the result of out-of-court settlements rather than awards by a jury.

IMPACT OF THE MEDICAL MALPRACTICE INSURANCE CRISIS ON THE AVAILABILITY AND ADEQUACY OF INSURANCE.

(1) Since 1973, the percentage of physicians with umbrella coverage has been declining, particularly in the high risk specialties, initially because of the increasing cost of the umbrella and the higher limits of basic coverage required to be eligible for an umbrella, and now because of the unavailability of this type of coverage.

(2) Approximately 26% to 28% of the physicians in private practice at the time of the survey who had insurance will be required to find a new source of basic coverage within the next 4-6 months.

(3) With the exception of the Joint Underwriting Association and its limited coverage, there does not appear at this time to be a viable market for this 26% to 28% of respondents in private practice who will be seeking a new source of coverage.

IMPACT OF THE MEDICAL MALPRACTICE INSURANCE CRISIS ON THE COSTS OF OPERATING A MEDICAL PRACTICE.

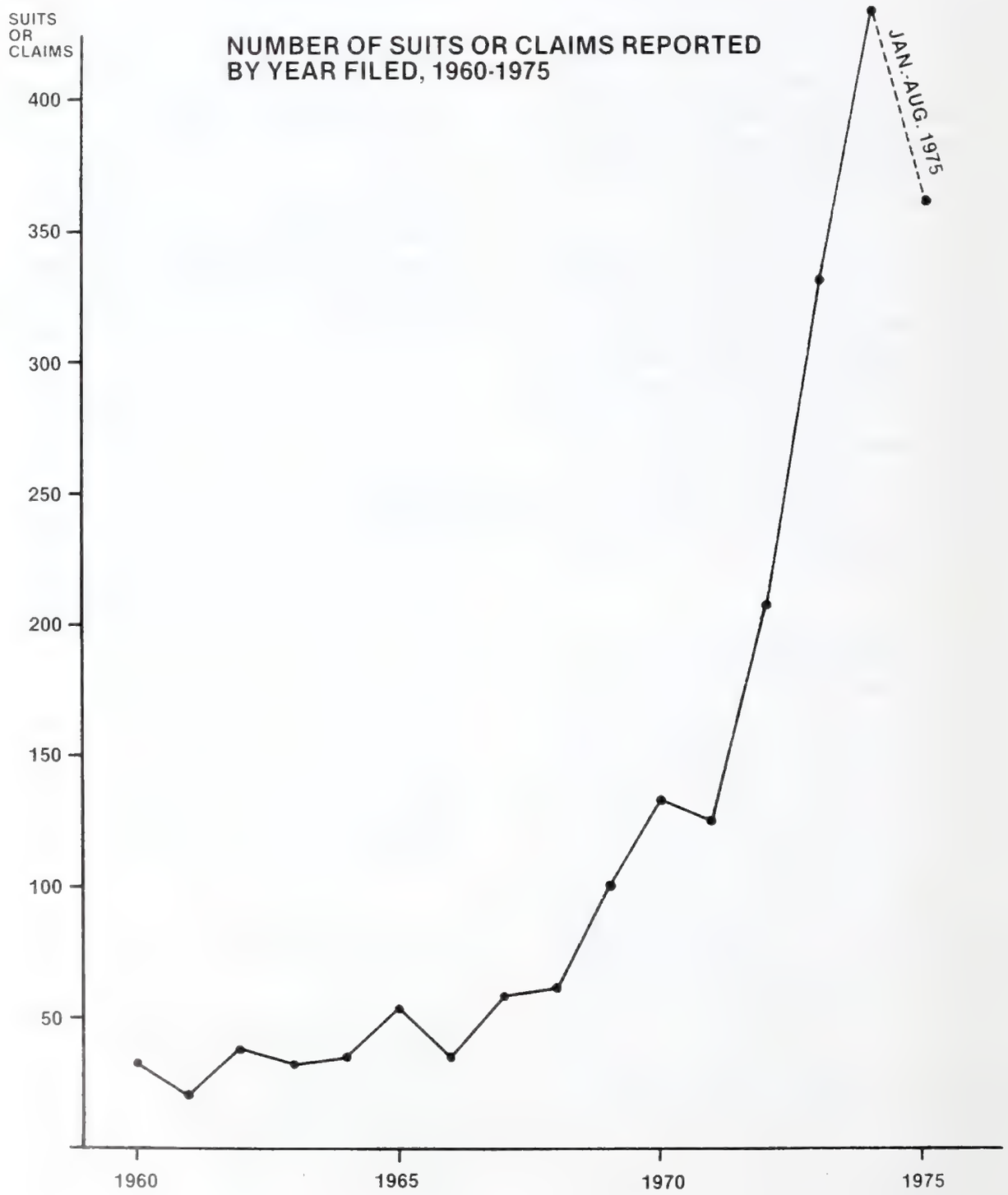
(1) Physicians cannot significantly increase practice revenue to pay higher malpractice insurance premiums by working more hours per week or weeks per year.

(2) Medical practice expenses increased substantially during the 1970-1975 period and the enormous increases in malpractice insurance premiums contributed significantly to increased practice expenses.

Increasing frequency of suits and claims

Gross number of reported suits and claims. While the gross number of suits and claims reported must be interpreted with the warning that it does not represent the total number of suits and claims filed in Texas, it does evidence an unmistakable upward trend. The reported number of suits and claims filed remained relatively stable from 1960 until 1968, but has increased dramatically since then. In comparison with 1968, the reported number of suits and claims filed in 1974 increased 613%.

Recognizing that as the population increased over the 1960-August 1975 period, the absolute number of suits and claims filed would also increase, even if the frequency did not. The reported number of suits and claims increased from .33 per 100,000 population in 1960 to 3.61 per 100,000 population in 1974. Again, this is not the actual rate of suits and claims per 100,000 population in Texas,



but only the rate per 100,000 reported in the survey. This does not alter the conclusion that the frequency of suits and claims filed has increased dramatically and that this increase is not due simply to population growth.

Distribution of suits and claims by year filed. Of all reported suits and claims, 60% were filed between January, 1972, and August, 1975. The data on frequency become more ominous when one considers that 16% of all reported suits and claims were filed during the first eight months of 1975. This 16% was higher than the percentage of all reported suits and claims filed in all years prior to 1965, higher than the percentage for any single year 1965 through 1973, and only four percentage points lower than the percentage of all reported suits and claims filed during 1974. Thus, the tremendous increase in the frequency of suits and claims filed has occurred in less than four years. In addition, the full impact has not been realized yet, since 54% of the reported suits and claims filed since 1972 are still pending.

Increasing frequency of suits and claims with multiple defendants. There is also a definite trend toward suits and claims with multiple defendants. Of all reported suits and claims filed prior to 1970, only 49.2% had multiple defendants in the original suit or claim; by comparison of the reported suits and claims filed during 1974, 64.4% had multiple defendants. For all reported suits and claims, 43.4% had a single defendant physician and 56.4% had multiple defendants (30.7% with one other, 19.4% with two other, and 3.6% with three or more other defendants). Thus while the majority of all reported suits and claims had multiple defendants in the original suit or claim, this percentage has increased significantly in recent years.

Suit and claims experience of Texas physicians

In an attempt to determine the distribution of suits and claims among Texas physicians, the incidence of suits or claims among the survey respondents was tabulated by several characteristics: specialty, medical school attended, board certification, years in practice, number of suits per physician and per specialty, reasons for filing the suit or claim, and sole defendant.

By specialty. One of every 3.6 (28%) respondents had experienced a suit or claim at some time during their professional careers. The percentage with a suit or claim ranged from 15% of the pediatricians, to 33% of the family physicians, to

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IMPACT OF THE MEDICAL MALPRACTICE INSURANCE CRISIS ON THE PHYSICIANS AND THE CITIZENS OF TEXAS

(1) Dramatic increases in malpractice insurance premiums for all types of coverage, ranging up to over 600% between 1970 and 1975 for physicians in the high risk specialties.

(2) The unavailability of adequate amounts of insurance coverage because of the increasing frequency and severity of suits and claims filed and of damages awarded within the last four years.

(3) Increases in the cost of health care, directly through increases in patient fees to pay malpractice premiums and indirectly through increasing numbers of actions taken because of the threat of a suit or claim and the need for an adequate defense.

(4) Reductions in the scope of practice in order to retain or obtain insurance, particularly by family physicians.

(5) Delegation of less responsibility by physicians to allied health personnel and limitations on procedures performed, resulting in fewer patient visits and in reductions on the type of services available in some areas.

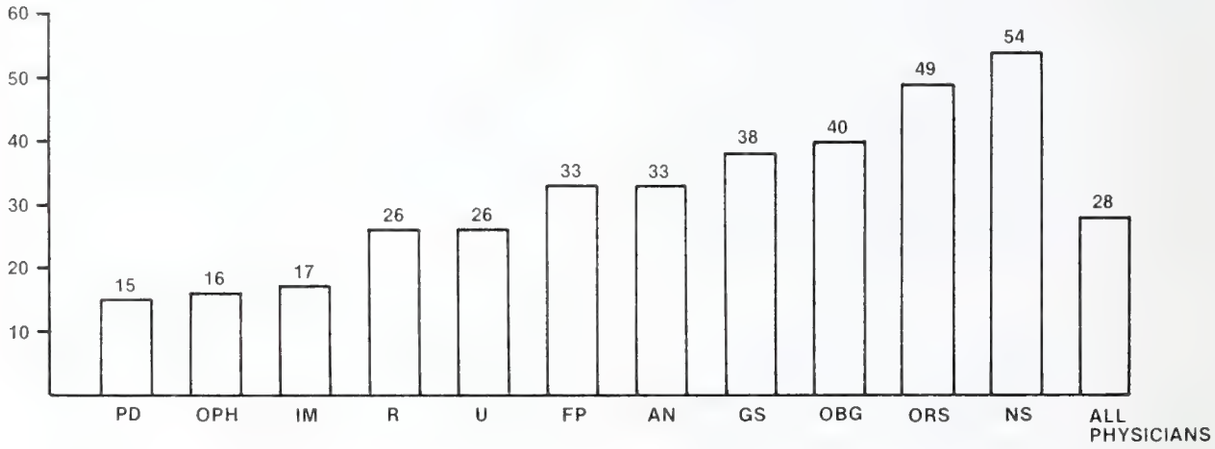
(6) Evidence of possible significant reductions in the availability of health services for beneficiaries of federal programs and/or higher fees for private patients.

54% of the neurosurgeons. Generally speaking, a higher percentage of the physicians in those specialties which have traditionally been considered "high risk" had experienced a suit or claim.

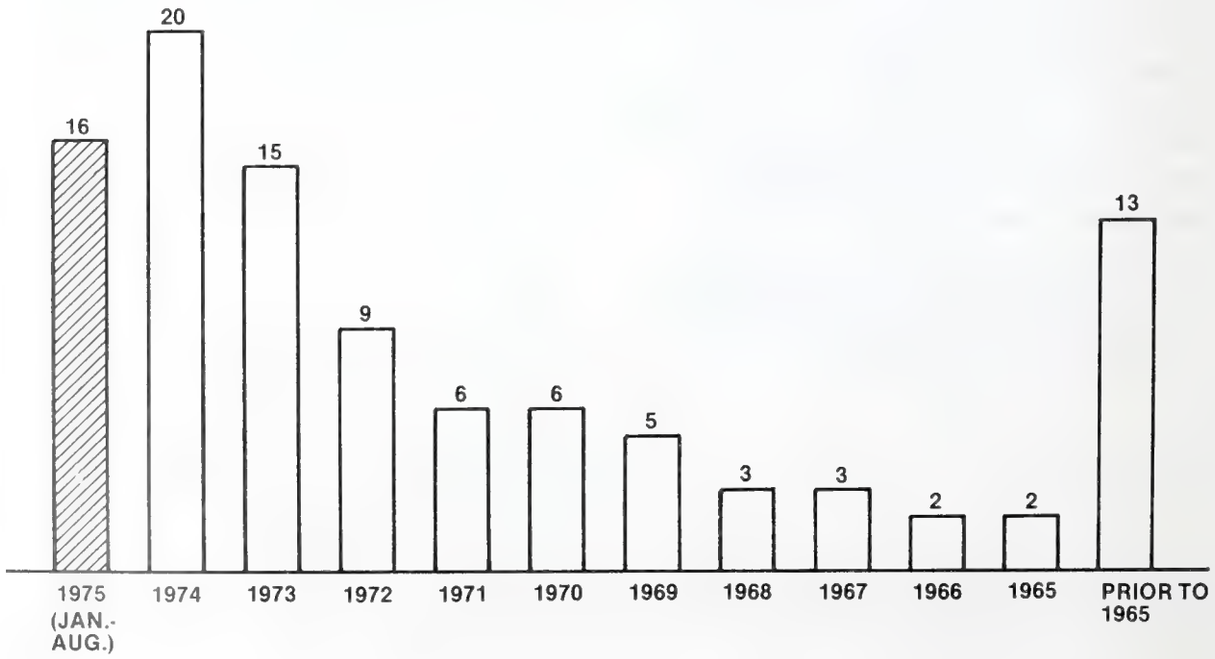
By selected years. According to surveys conducted by the American Medical Association, in 1956 10.1% of the physicians in Texas had experienced a suit or claim. By 1963, this percentage had increased to only 12.4% of the physicians. Thus, while the percentage of Texas physicians who had experienced a suit or claim only increased 2.3 percentage points between 1956 and 1963, it more than doubled between 1963 and August, 1975.

By medical school attended. Of the survey respondents, 30.7% of the graduates of US schools outside of Texas, 30.4% of the graduates of Texas medical schools, and 23.4% of the graduates of foreign medical schools had experienced a suit or claim. The lower percentage for foreign medical graduates is probably due to their age distribution (younger than US physicians) and specialty distribution (higher

PERCENTAGE OF PHYSICIANS WHO HAVE HAD A SUIT OR CLAIM FILED AGAINST THEM DURING THEIR PROFESSIONAL CAREER



PERCENTAGE DISTRIBUTION OF ALL SUITS OR CLAIMS EVER FILED BY YEAR FILED



percentage in the nonsurgical specialties), than to any factor directly attributable to their medical education.

By board certification. Of the respondents, 28% of the physicians who were board certified and 28% of the physicians who were not board certified had experienced a suit or claim. For the individual specialties, the experience was mixed. For several of the high risk specialties, the percentage of board certified physicians who had experienced a suit or claim was higher than the percentage of the physicians not certified.

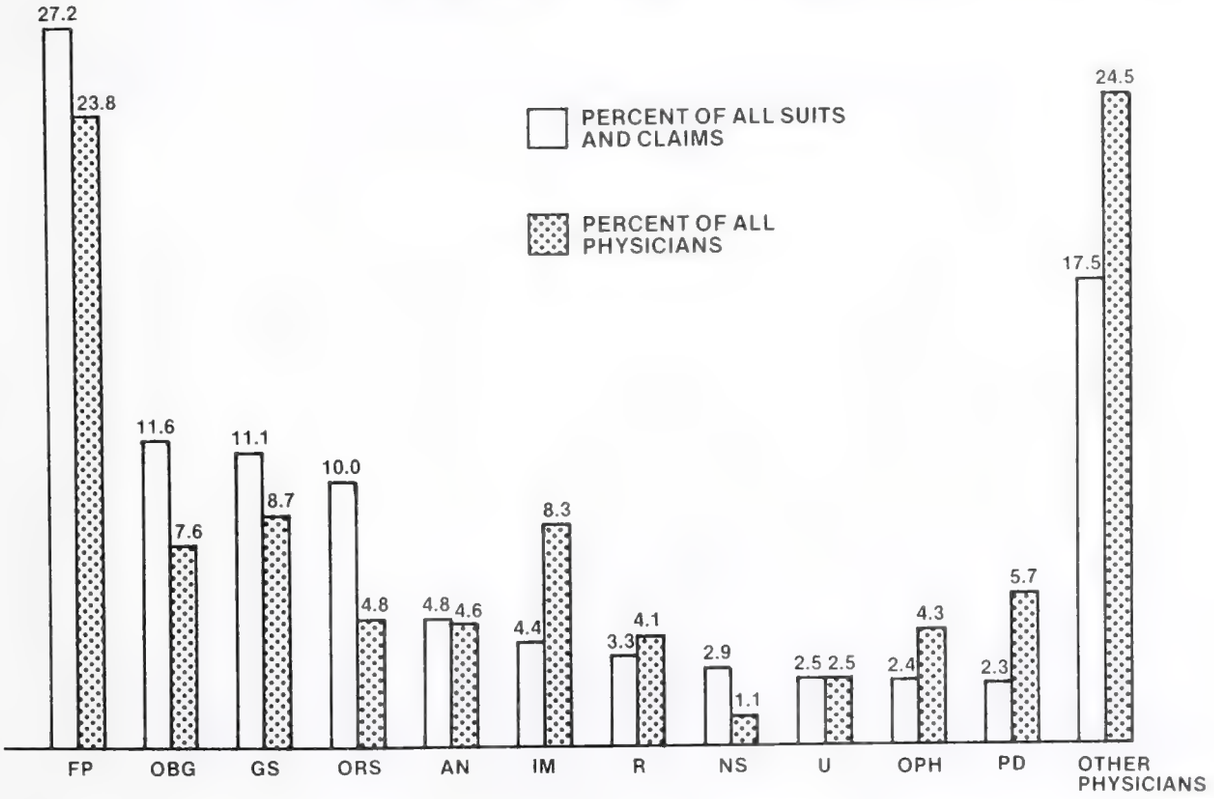
By years in practice. The percentage of respondents who had experienced a suit or claim steadily increased from 16% of the physicians in practice 0-5 years to 37% of those in practice 26-30 years, and then declined after that. No significant relationship seems to exist between the number of years in practice and the percentage with a suit or claim.

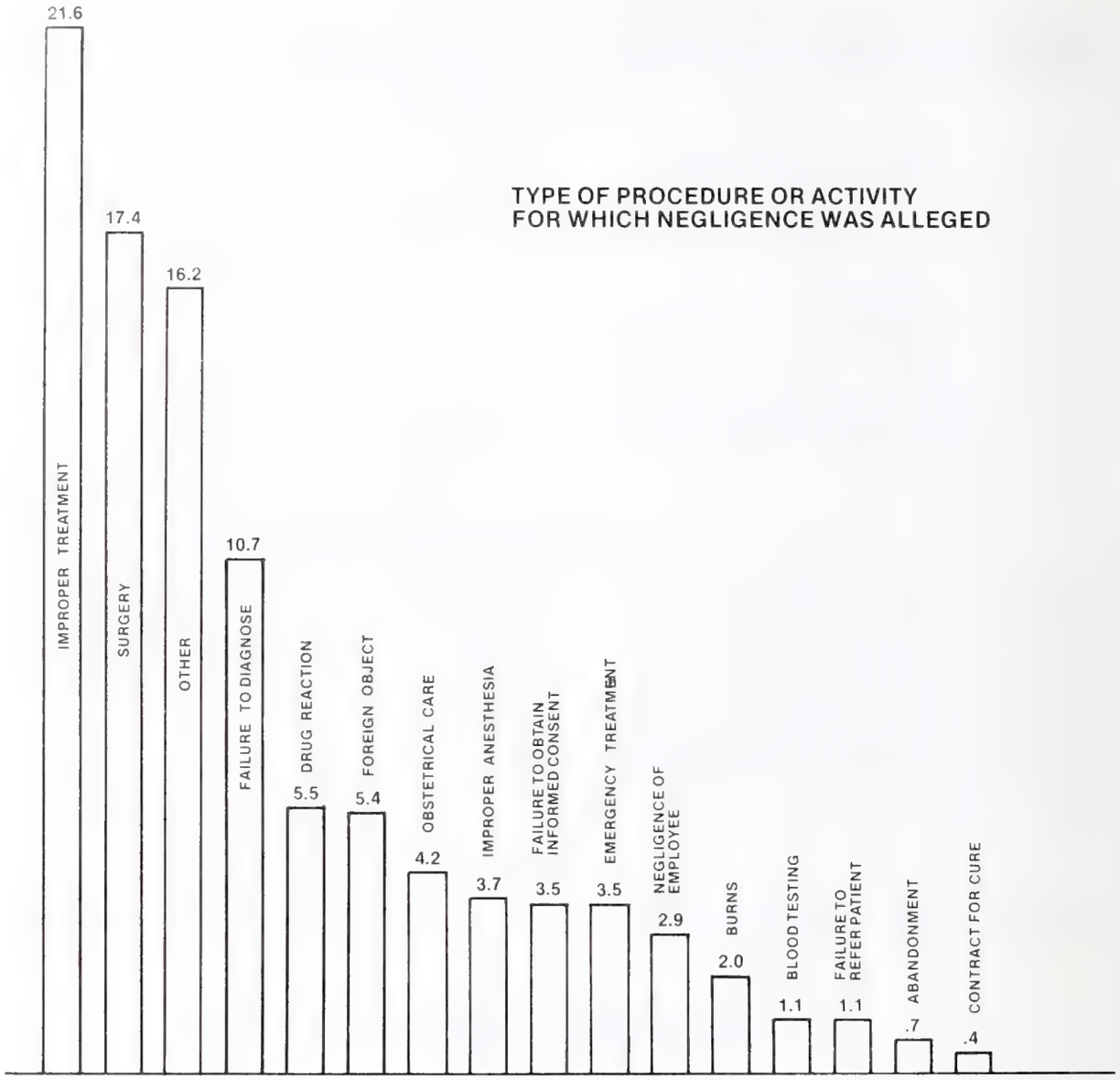
Number of suits or claims per physician. Of the respondents, 72% had never experienced a suit or claim, 20% had one suit or claim, 6% had two suits or claims, 2% had three suits or claims and 1% had four or more suits or claims. Of the 8% of the physicians with more than one suit or claim, 6.8% were in the high risk specialties of anesthesiology, family practice, general surgery, neurosurgery, obstetrics/gynecology, orthopedic surgery, otorhinolaryngology, plastic surgery, and urology.

Distribution of suits and claims by specialty. Family physicians accounted for the largest percentage of physicians (23.8%) and for the largest percentage of all reported suits and claims filed (27.2%). As would be expected, the high risk specialties (obstetrics/gynecology, general surgery, orthopedic surgery, neurosurgery, and family practice) accounted for larger percentages of all reported suits and claims than their percentages of all physicians.

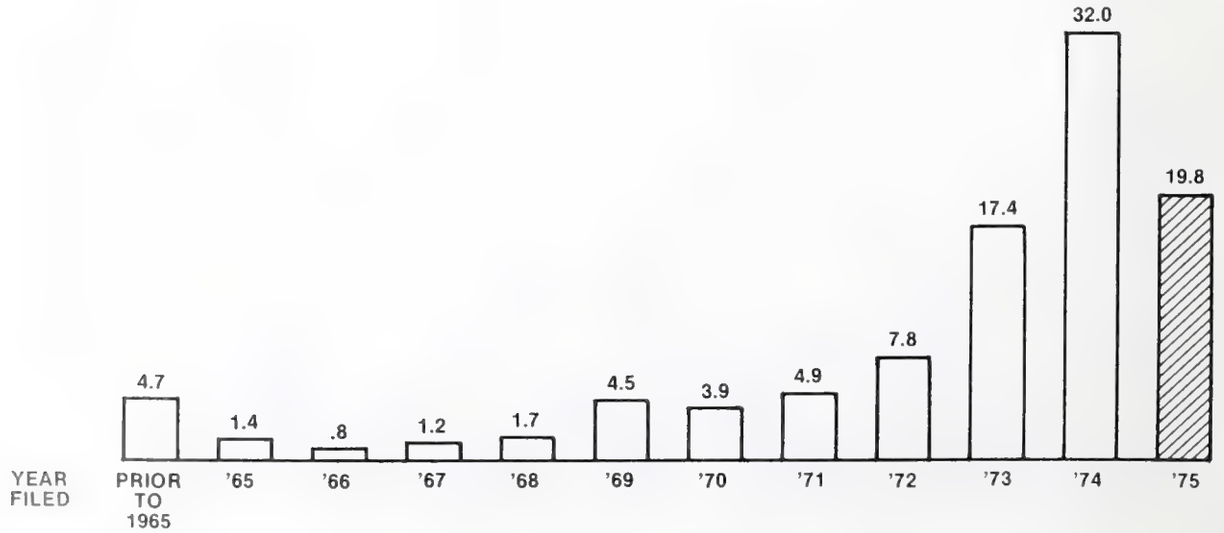
Reasons why suits or claims were filed. The major reasons for filing suits and claims included improper treatment (21.6%), surgery (17.4%), other reasons

PERCENTAGE DISTRIBUTION OF REPORTED SUITS AND CLAIMS BY SPECIALTY





PERCENTAGE DISTRIBUTION OF DAMAGES SOUGHT IN ALL REPORTED SUITS AND CLAIMS BY YEAR FILED



(16.2%) and failure to diagnose (10.7%). The other 34.1% of the reported suits and claims were distributed among 12 procedures or actions, with no single one accounting for more than 6% of the reported suits and claims.

Sole defendant by specialty. In 43% of all suits and claims, the physician was the sole defendant in the original suit or claim. By comparison, the physician was the sole defendant in only 14% of the suits and claims filed against anesthesiologists. Except for ophthalmology and orthopedic surgery, the majority of suits and claims filed against physicians in the major specialties included multiple defendants.

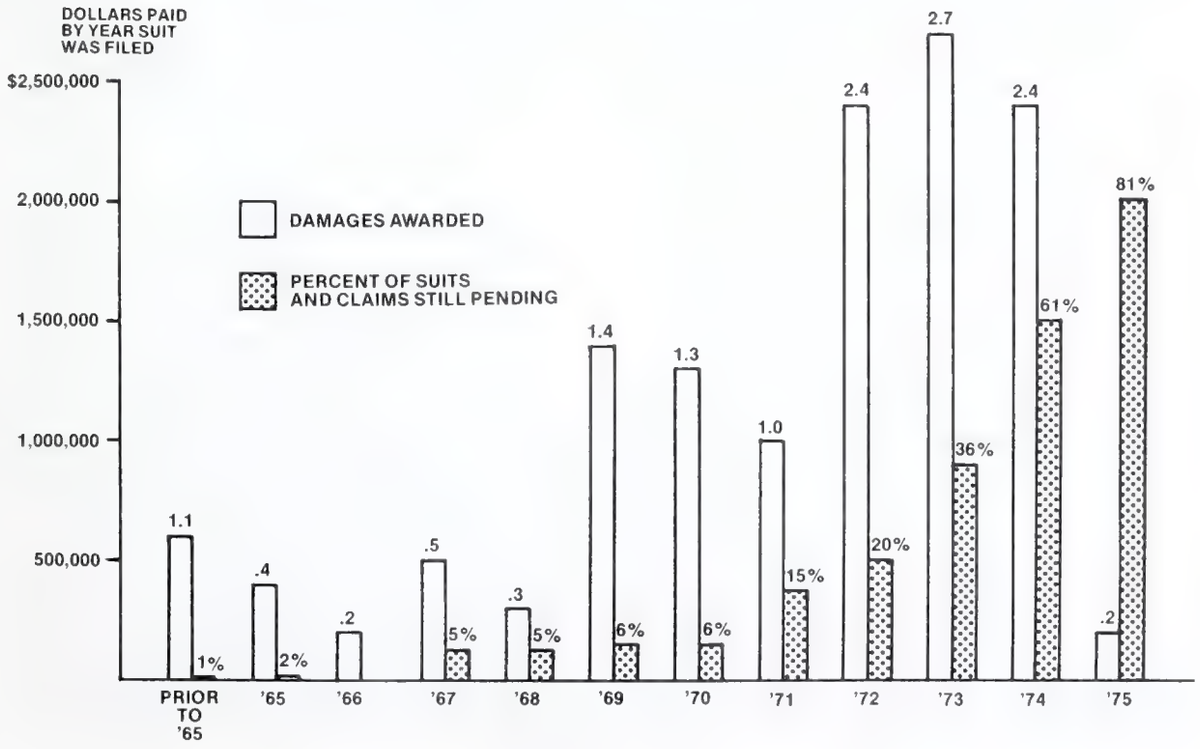
Increasing severity of suits and claims

As has been indicated, Texas has not escaped the increasing frequency of suits and claims filed. The TMA survey also shows conclusively that Texas has not escaped the second characteristic of the malpractice insurance crisis, an alarming increase in the severity of suits and claims filed.

Increasing amounts of damages sought. In recent years smaller percentages of all reported suits and claims filed during any particular year were seeking under $10,000, $10,000-$24,999, and $25,000-$99,999 in damages and larger percentages were seeking $100,000-$499,999, $500,000-$999,999, and $1,000,000 and more in damages. For example, of the suits and claims filed in 1965, 18.9% were seeking under $10,000, as compared with only 7.7% of those filed in 1974; 29.2% of those filed in 1965 were seeking $25,000-$99,999, as compared with 17% of those filed in 1974; and 4.2% of those filed in 1965 were seeking $1,000,000 and over as compared with 21.5% of those filed in 1974.

Specified amounts of damages sought by filing year. While 60% of all reported suits and claims were filed between 1972-August 1975, even higher percentages of those seeking large awards were filed during that period. Sixty-four percent of the reported suits and claims seeking $100,000-$199,999, 68% of those seeking $300,000-$399,999, 76% of those seeking $500,000-$599,999, and 81% of the

REPORTED AMOUNTS AWARDED BY YEAR SUIT OR CLAIM FILED



suits and claims seeking $1,000,000-$1,-999,999 were filed between January 1972 and August, 1975.

Gross amount of damages sought in reported suits and claims. The total amount of damages sought in suits and claims filed in any particular year remained relatively stable until 1971 but has increased significantly since. Seventy-seven percent of the total damages sought in all reported suits and claims were requested in filings between January 1972 and August 1975. In addition, the percentage of all damages requested in suits and claims filed between January and August, 1975 (19.8%) was larger than the percentage of all damages sought in all suits and claims filed prior to 1965 and in any single year 1965-1973.

Increasing severity of amounts awarded

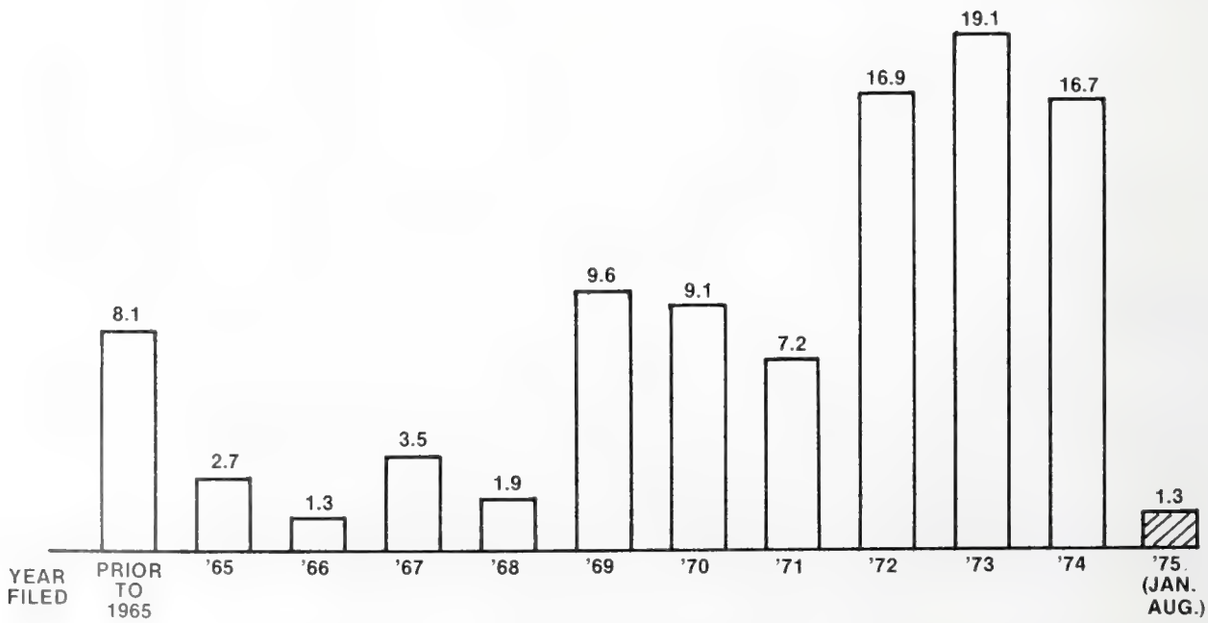
Providing a totally accurate picture of the increasing severity of awards is more difficult since 54% of the suits and claims filed since 1972 are still pending.

Increasing amounts of damages awarded. For suits and claims filed prior to 1973, the percentage with awards under $10,000 is declining and the percentages with awards of $10,000-$24,999, $25,000-$99,999, $100,000-$499,999, and over $500,000 are increasing.

Gross number of reported awards by year filed. While the gross number of awards reported does not represent the total number of awards in Texas, the upward trend is certainly significant. The total number of reported awards has been increasing steadily since 1968. In comparison to 1968, there was a 364% increase in the reported number of awards from suits and claims filed in 1973, with 36% of the suits and claims filed in 1973 still pending. It is significant to note that 60.6% of all reported suits and claims with awards have occurred as the result of suits and claims filed since 1970.

Gross reported dollars awarded by year suit or claim filed. Significant among the survey findings is the fact that the total reported dollars paid as a result of suits and claims filed in 1974 is already approximately equal to the total reported dollars paid on suits and claims filed in 1972

PERCENTAGE DISTRIBUTION OF TOTAL REPORTED DOLLARS AWARDED BY YEAR SUIT OR CLAIM WAS FILED



with 61% of the suits and claims filed in 1974 still pending.

Of the total dollars ever paid, 54% were paid as a result of suits and claims filed since 1972. Thus, not counting any dollars paid since 1972 on suits and claims filed prior to 1972, 54% of all reported dollars awarded have been paid since 1972 with 54% of the reported suits and claims filed since 1972 still pending.

Comparison of damages sought with damages awarded by amount. The significant difference between the distribution of suits and claims by damages sought and by damages awarded is due partially to the time lag between filing and closing. The distribution of suits and claims by amount of damages sought reflects the tremendous increase in recent years in the number of suits and claims seeking large damages, while the distribution of suits and claims with awards cannot yet account for the large percentage of those filed in recent years which are still pending. Still, it is extremely important to note that the 4.6% of all reported awards for $100,000 or more accounted for 48.8% of all dollars paid. Thus, it is evident that the large awards have an enormous impact on the total dollars paid. Considering that 70% of all reported suits and claims seeking $100,000 or more in damages have been filed since 1972, the potential for tremendous dollar payments within the next few years is significant.

Percentage of reported suits and claims with awards of $20,000 and over in relation to dollars paid. The percentage of suits and claims with awards of $20,000 and over is increasing and those awards represent an increasing percentage of the dollars paid. For example, in all suits and claims filed in 1965 with awards, 16% had awards of $20,000 or more, but those awards accounted for 76.2% of the dollars paid as a result of suits and claims filed in 1965. For those filed in 1972, awards of $20,000 or more had reached 20% of the suits and claims with awards and 86% of the dollars paid.

Disposition of suits and claims by year filed. If the disposition of suits and claims filed has changed in recent years, it will have a bearing on the picture in view of the increased amount of damages being sought and awarded. The current status of suits and claims reported since 1966 shows the percentage decided in favor of the physician is declining and the percentage decided in favor of the patient is increasing. Should these trends continue, the frequency and severity of awards will certainly increase.

IMPACT OF THE MEDICAL MALPRACTICE INSURANCE CRISIS IN TEXAS ON PHYSICIANS AND THE PUBLIC

The medical malpractice insurance crisis has had an adverse effect on the premiums which physicians are forced to pay to obtain coverage, on the cost of medical care to the public and the patient, and on the availability of quality medical care.

Impact of the crisis on premiums

The pricing of medical malpractice insurance in today's market must account for the following conditions: (1) 60% of all reported suits and claims have been filed since 1972; (2) 16% of all reported suits and claims were filed during January-August, 1975; (3) 77% of the total damages sought in suits and claims had been requested in suits and claims filed since 1972; (4) 54% of all dollars awarded have been paid on suits and claims filed since 1972 with 54% of the reported suits and claims filed since 1972 still pending; and (5) suits and claims with awards of $100,000 or more have accounted for only 4.6% of the suits and claims with awards, but 48.8% of the dollars paid. These conditions have introduced a tremendous uncertainty into the pricing mechanism which, in turn, has resulted in substantial premium increases in Texas.

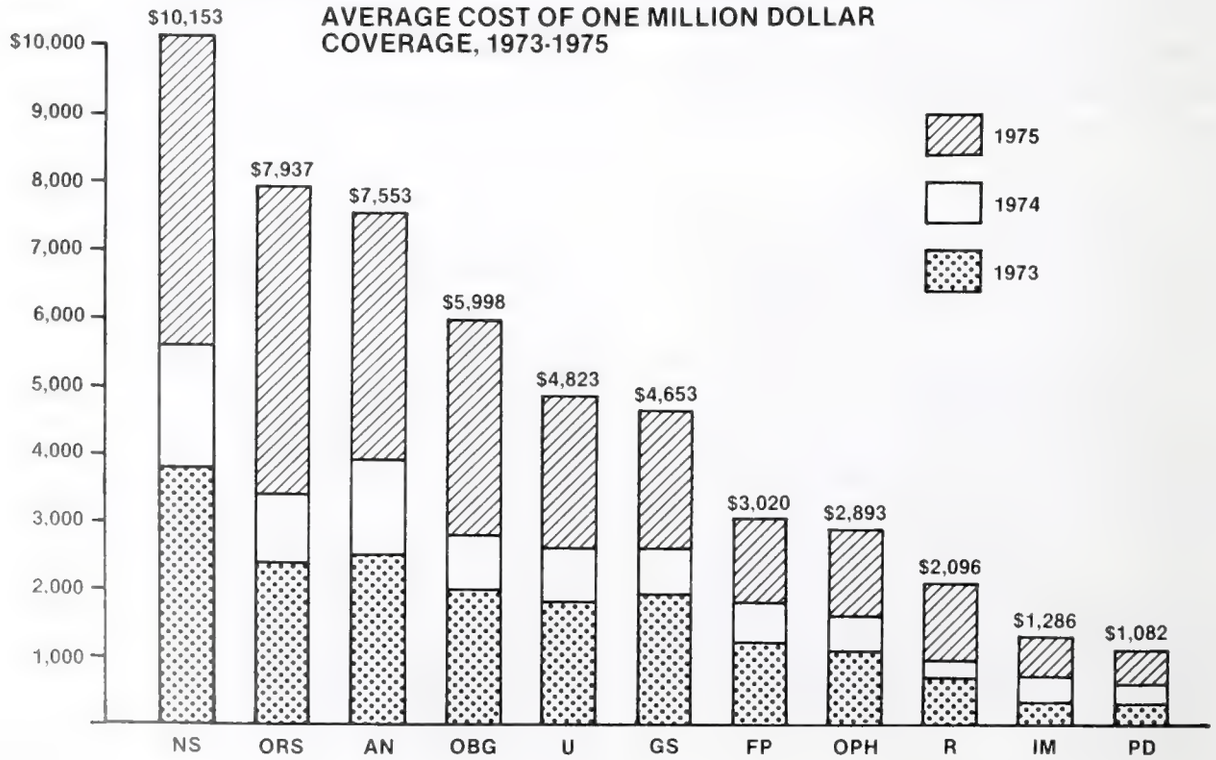
Obviously the 1975 TMA survey cannot reflect the premium increases which have occurred since the tabulation of the results. The average premiums presented in

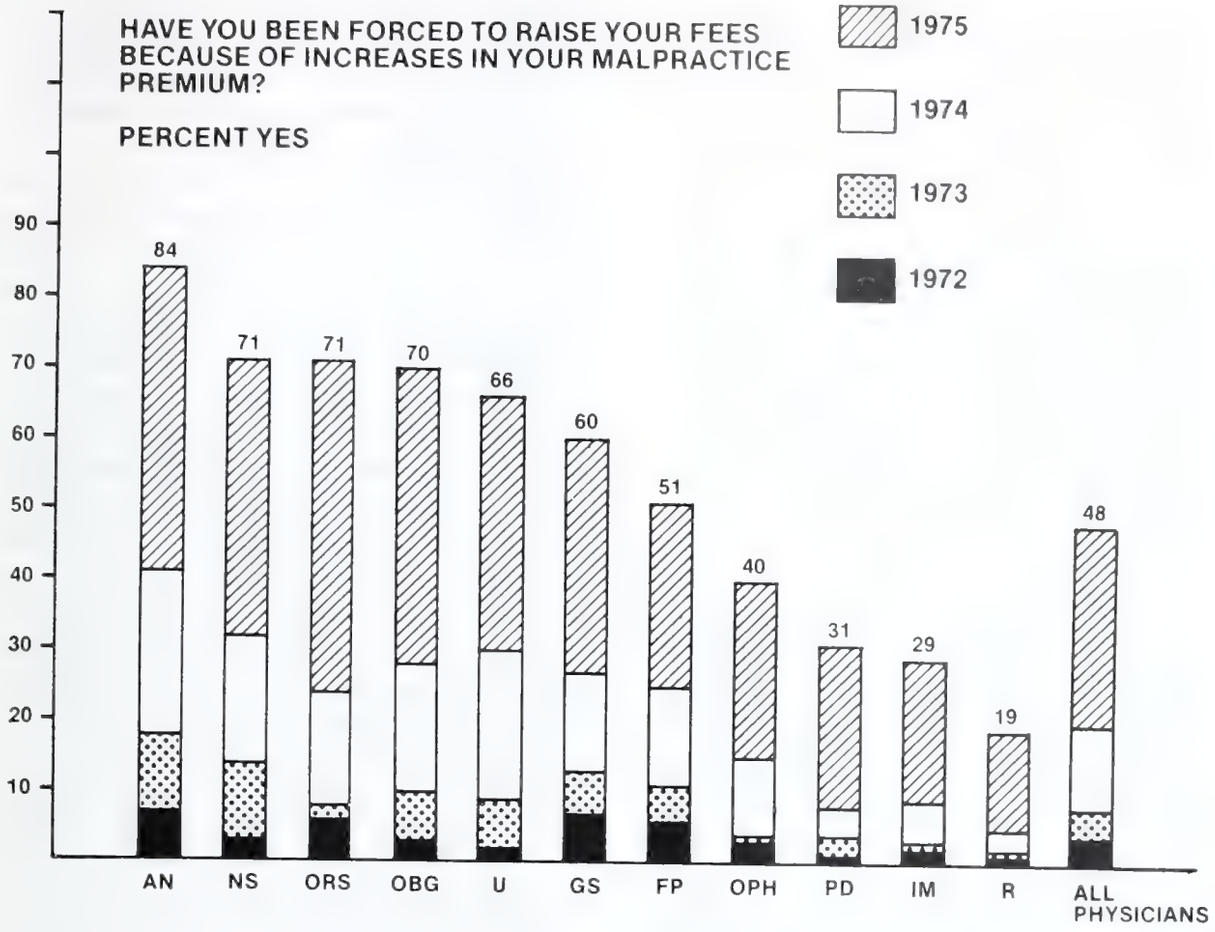
the report reflect a combination of rates charged during the first six months of 1975 and the last six months of 1975, but more heavily weighted by the former, which were lower rates. All average premiums presented are for physicians in private practice only.

Impact of crisis on premiums for basic coverage. Not only have the premiums increased dramatically, but the dollar differences among the premiums charged higher risk specialties have widened significantly since 1970. In 1975, the average cost of a $100,000/$300,000 basic policy for physicians in private practice ranged from $7,265 for anesthesiologists to $2,788 for family physicians to $941 for physicians in internal medicine. Percentage increases in the $100,000/$300,000 premiums between 1970 and 1975 ranged from 571% for anesthesiologists (from $1,083 in 1970 to $7,265 in 1975), to 222% for ophthalmologists (from $689 in 1970 to $2,216 in 1975). Percentage increases between 1970 and 1975 for the $200,000/$600,000 premium ranged from 631% for orthopedic surgeons (from $942 in 1970 to $6,889 in 1975), to 417% for general surgeons (from $851 in 1970 to $4,396 in 1975), to 290% for family physicians (from $748 in 1970 to $2,915 in 1975).

Impact of the crisis on premiums for umbrella coverage. As was previously pointed out, the percentage of physicians with umbrella coverage has decreased, and this type of coverage is generally not available at this time. Where umbrella coverage was available, the percentage increase in the premium between 1973 and 1975 ranged from 272% for neurosurgeons (from $1,031 in 1973 to $3,839 in 1975), to 194% for obstetrician/gynecologists (from $378 in 1973 to $1,113 in 1975), to 110% for family physicians (from $331 in 1973 to $695 in 1975).

Impact of the crisis on premiums for adequate malpractice insurance. The percentage of physicians with umbrella coverage was increasing until availability became a problem and was still increasing in some of the lower risk specialties during the first part of 1975. It is apparent that many physicians did not feel comfortable with lower limits of coverage in view of the escalating number of suits and claims filed and severity of awards. The average cost in 1975 of $1,000,000 of insurance coverage for physicians in private practice ranged from $10,513 for neurosurgeons, to $7,-





937 for orthopedic surgeons, to $3,020 for family physicians, to $1,082 for pediatricians. The percentage increases between 1973 and 1975 in the average cost of $1,000,000 coverage ranged from $233% for orthopedic surgeons (from $2,385 in 1973 to $7,937 in 1975) to 156% for general surgeons (from $1,820 in 1973 to $4,653 in 1975), to 137% for family physicians (from $1,272 in 1973 to $3,020 in 1975).

It is evident that the uncertainty regarding future increases in the number and severity of suits and claims filed and of awards has had a severe effect on premium costs which must ultimately be reflected in higher medical care prices and fees.

Impact of crisis on medical care costs to the public and to the patient

The cost of physicians' insurance is necessarily passed on where permitted through increased fees and is ultimately paid by the patient directly or through the health insurance premium. Individual physicians are alarmed that they have had to increase their coverage, where possible, and that the premium rates have increased tremendously even at no increase in coverage.

Impact of crisis on physicians' fees. Of the survey respondents, 48% in private practice indicated that they were forced to raise their fees during 1975 because of increases in their malpractice premiums; 20% indicated they raised their fees in 1974 for this reason; 8% in 1973; 4% in 1972; and 3% in 1971 and 1970. While 48% of all private practitioners responding raised their fees in 1975 because of malpractice insurance, over 70% of the physicians in the high risk specialties raised theirs, reflecting the larger increases in their premiums. In addition, 51% of the family physicians raised their fees.

Precentage fee increases due to cost of malpractice insurance. The average fee increase for all physicians in private practice who raised their fees in 1975 to compensate

for premium increases was 11%; for 1974 it was 9%; and for 1973 it was 8%. The percentage increase in fees generally followed the risk classifications, with higher risk specialties raising their fees more than the lower risk specialties.

Expectation of raising fees in future. Of all respondents in private practice, an overwhelming 92% indicated they would raise their fees in the future if their premium continues to rise. The percentages ranged from 98% of the orthopedic surgeons, to 96% of the obstetrician/gynecologists, to 93% of the family physicians to 89% of the radiologists.

Impact of crisis on medical care cost to the public not directly related to the cost of the malpractice premium. In addition to the direct costs of malpractice insurance which are passed on through patient fees, there is evidence of additional costs to patients and the public for services which may not be absolutely required, but which are performed to forestall the possibility of a suit or claim being filed or to provide a defense if a suit or claim is initiated.

Sixty-six percent of the private practitioners including 80% of the family physicians, responded that they felt compelled to order more lab tests because of the threat of a suit or claim. Sixty-seven percent of the private practitioners, including 82% of the family physicians, felt compelled to order more x-rays. Sixty-five percent of the private practitioners, including 80% of the family physicians, felt compelled to use consultants more often. Forty-eight percent of the private practitioners, including 64% of the family physicians, felt compelled to hospitalize more patients.

Thus, the rapidly escalating malpractice premiums have had and will continue to have an effect on physicians' fees and charges, directly increasing the cost of medical care. In addition, because of the threat of a suit or claim, physicians are practicing defensive medicine which, while contributing to the overall quality of care, may contribute more to costs of care than to the benefits resulting from the additional care. The evidence is quite clear that the medical malpractice insurance crisis has increased the cost of medical care both directly through fees and indirectly through additional services provided for protection against future suits or claims.

Impact of crisis on the availability of quality medical care for the public

The impact of the medical malpractice insurance crisis on the health care system extends far beyond the problem of increased costs, striking at the very nature of the care provided. Because of the crisis physicians are being required by insurance companies to reduce the scope of their practices in order to obtain insurance or are doing so voluntarily to avoid the possibility of a claim or suit. The crisis is also beginning to affect physicians' willingness to treat Medicare and Medicaid patients because of the reimbursement levels available under these programs.

Reductions in the scope of practice required by insurance companies in order to obtain insurance. Eight percent of the survey respondents stated that they were required to reduce the scope of their practice in order to obtain malpractice insurance. Of perhaps the greatest concern in terms of the availability of health services is that one of five (20%) family physicians were required to do so. By type of practice reduction required for family physicians, 8% stopped obstetrics; 4% stopped gynecology; 13% stopped surgery; and 9% stopped other activities such as emergency room work, spinals, and saddle-blocks. Radiologists were required to stop certain types of x-ray therapy; general surgeons were required to stop doing emergency room work and selected orthopedic procedures; and psychiatrists were required to stop utilizing certain types of drug therapy. Thus while the forced reductions have had their greatest impact in family practice, they have affected other medical fields as well.

Shifting distribution of family physicians among the risk classes. Between 1973 and 1975, family physicians have been shifting out of the higher risk classes IV and V and

into the lower risk classes I and II. Since by definition physicians in the lower risk classes provide a more limited range of services, the shifting distribution of family physicians toward these lower risk classes implies a reduction in the range of services available, a situation which may be of critical importance to smaller communities.

Practice reductions because of the threat of a possible suit or claim. Fifty percent of the responding physicians in private practice felt compelled to delegate less responsibility because of the threat of a suit or claim, including 59% of the family physicians, 53% of the obstetrician/gynecologists, and 44% of the pediatricians. The direct effect of the delegation of less responsibility is a decrease in productivity, resulting in fewer patient visits per year. These reductions will be particularly significant in terms of these primary care specialties since they have traditionally seen larger numbers of patients partially as a result of the delegation of responsibility.

Fifty-one percent of all private practitioners felt compelled to limit procedures performed because of the threat of a suit or claim including 73% of the family physicians. This high percentage has implications not only for the quantity, but also the quality of services available, particularly in smaller communities. It may also have an effect on the cost of services, since it is generally true that family physicians are reimbursed at a lower level for certain procedures than are other specialists.

Impact of the crisis on the availability of health care for those covered by Medicare and Medicaid. One casualty of the malpractice crisis appears to be the availability of medical care for Medicare and Medicaid beneficiaries. Respondents indicated that 22% of their patients were Medicare beneficiaries and 10% were Medicaid beneficiaries. As might be expected, the percentage of patients who were Medicare beneficiaries was higher in such specialties as urology (36%), radiology (29%), and ophthalmology (32%). For family practice, 21% of the patients were Medicare beneficiaries, and 12% were Medicaid beneficiaries.

Because the reimbursement for physicians treating these patients fails to allow for the dramatic increases in malpractice premiums in the last few years, many physicians are beginning to reduce the number of Medicare and Medicaid patients. Six percent of all survey respondents in private practice, including 8% of the family physicians, expected the percentage of their patients who were Medicare beneficiaries to decline. Ten percent of all survey respondents in private practice, including 13% of the family physicians, expected the percentage of their patients who were Medicaid beneficiaries to decline. If the level of reimbursement under these programs does not improve, and since the level of reimbursement under these programs is not at the discretion of the physician, physicians may either reduce their Medicare and Medicaid patient loads and/or pass on even larger increases in patient fees to their patients with private insurance where they do have discretion over the fees charged.

SUMMARY

One of the most troubling aspects of the medical malpractice insurance crisis has been the absence of reliable data. The Texas Medical Association has no greater priority or interest than to assist in finding a solution to a crisis that is having a significant impact on its members' patients and the public.

The 1975 TMA Professional Liability Insurance Survey was conducted to provide the documentation which is needed for an objective analysis of current conditions. Only through objective analysis can an equitable solution be found.

The survey results have pinpointed the dramatic impact the medical malpractice insurance crisis is having on the costs of medical care, both directly and indirectly, on the costs of malpractice insurance premiums, and on the availability of quality health care. The members of the Texas Medical Association hope and expect that the information presented in this report will contribute to a responsible, constructive and fair solution to a crisis which affects all Texans.

Annual Session attracts 4,897

1. Registration crowds swelled to 4,897 during the 1976 Texas Medical Association Annual Session in Dallas. 2. Because it is an election year, TEXPAC (Texas Medical Political Action Committee) sponsored a presidential preference poll in which Ronald Reagan gained 65% of the vote. 3. The faces behind it all: the Council on Annual Session. Seated (l-r) are Dr. Joseph C. Ogle, Dr. William Powell, Dale Willimack, coordinator of Annual Session, Dr. Daniel Jenkins, Dr. Charles W. Mangum, Jr., Dr. William S. Derrick, Dr. Roy H. Baskin, chairman, and Dr. William Conkling. 4. Some members of the Woman's Auxiliary to TMA relax from convention activities in the hospitality suite.

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1. Gina Pendergrass discusses her science fair project with an Annual Session participant. She was sponsored by the Lubbock-Crosby-Garza County Medical Society. 2. The Aesculapius Award for the best exhibit by a Texas physician went to Dr. Phillip E. Williams, Jr., of Dallas for "Percutaneous Coagulation of the Gasserian-Ganglion (PCGG) for Trigeminal Neuralgia." 3. Placing first in group exhibits was "A Simple Method of Intraoperative Autotransfusion," by Drs. G. P. Noon, R. R. Solis, and E. A. Natelson, and P. M. Kent, GN, Houston. 4. Placing first in institutional exhibits was "Treatment of Bronchial Asthma with Tervutaline," by Drs. W. F. Miller and A. Geumei, Dallas. 5. Placing first in educational-promotional exhibits was "Accidental Poisoning—The Growing Problem," by M. D. Ellis, MS, The University of Texas Medical Branch Poison Control Center, Galveston. Not pictured, but placing first in individual exhibits was "Cinemascopia—A New Dimension in Nuclear Cardiology," by Drs. H. C. Allen, Jr., E. Fletcher, S. Bekheit, and W. C. Stewart, Houston.

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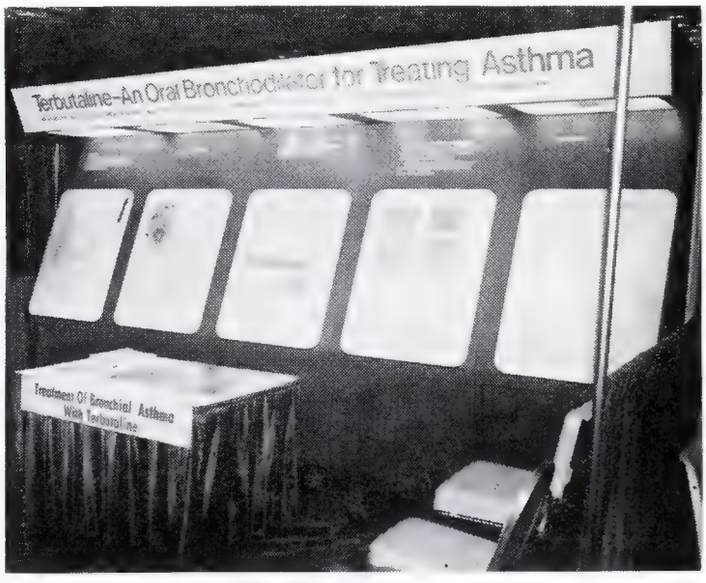

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Distinguished guests among participants

Luncheon speakers drew capacity crowds during the Annual Session. They were 1. former Texas Governor John B. Connally, 2. Dr. Max H. Parrott, president of the American Medical Association, and 3. Ann Landers, syndicated columnist. 4. Dr. Joe T. Nelson of Weatherford was named the recipient of the 1976 TMA Distinguished Service Award. 5. Dr. Carlos D. Godinez (right), McAllen, chairman of the Board of Trustees of the Valley Family Physicians Scholarship Fund, presented a $35,000 check to Dr. John M. Smith, Jr., chairman of the TMA Board of Trustees. The fund is to be administered by the TMA board. The loans will be available to students from the ten counties in the Rio Grande Valley who are interested in practicing in those counties. 6. An international visitor to Annual Session was Dr. J. P. Gauthier-Lafaye (center), chairman of the Department of Anesthesiology, Louis Pasteur University, Strasbourg, France. Pictured with Dr. Gauthier-Lafaye are Dr. Richard G. Black (left) of Seattle and Dr. Alex Straja of Houston. 7. Incoming TMA vice president and president respectively are Dr. Sheridan S. Evans (left), McAllen, and Dr. L. S. Thompson, Jr., Dallas. 8. Dr. Nym L. Barker (left), Paris, outgoing TMA president, congratulates the new president, Dr. Thompson.

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Variety marks convention program

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1. "The Hawk," a sculpture by Dr. Bland Schwarting of San Antonio won Best of Show in the Physicians' and Spouses' Art Exhibition. 2. Winners of the 1976 TMA Anson Jones Award competition for excellence in communicating health information to the public are (l-r) Sharon Noble, KXAS-TV, Fort Worth; Brenda Stone, *The Houston Post*; Mary Jane Schier, *The Houston Post*; Lee Wilcox, KGNC radio, Amarillo; Dave Floyd, KXII-TV, Sherman; Kathy Pill, *The Arlington Citizen-Journal*; Thomas Winfield, *Shell News*; and Sue Dye, *Temple Daily Telegram*. 3. Continental Breakfast presentations, a regular feature of Annual Session, were again popular with 13 different topics of discussion. 4. Dr. James M. Atkins of Dallas discussed arrhythmia recognition and defibrillation in one of the group sessions during the cardiopulmonary resuscitation training program.

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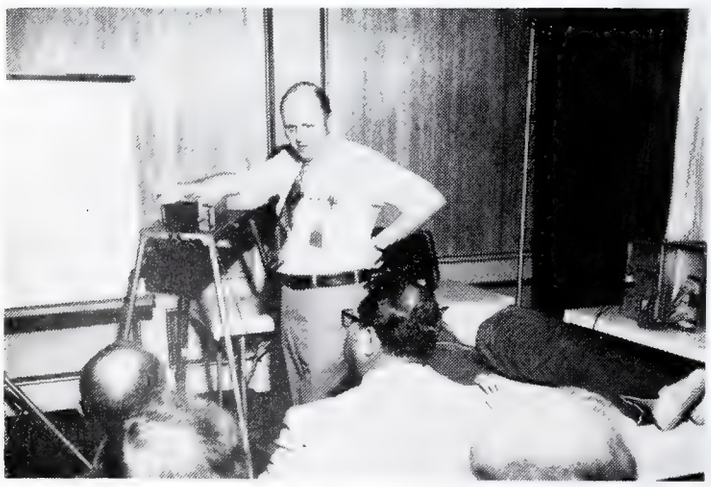

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1. The Ninth Annual Physicians' and Spouses' Art Exhibition featured a variety of paintings, photographs, sculpture, and arts and crafts for display and sale. 2. Pictured is the live teaching demonstration on office management of ENT problems which was conducted by Dr. Edward A. Newell of Dallas. 3. Another regularly popular feature of Annual Session, the "Curbstone Consultation," brought ideas and discussion from many doctors. Held on two afternoons, the round table discussions featured a variety of topics—22 in all.

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Infectious Diseases
S. Riggs, M.D., F.A.C.P.

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F. A. Goss, M.D.
A. M. Wyss, M.D., F.A.C.Pr.M.

Oncology
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B. D. Walker, M.D.

DERMATOLOGY
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D. W. Owens, M.D., F.A.A.D.

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Surgical Endoscopy & Colonoscopy
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W. A. Johnson III, M.D., F.A.C.O.G.

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R. M. Thaller, M.D.

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TEXAS
State Journal of Medicine
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The Approaching Reform in Texas Medical Education

August, 1905—The first step in the reformation of the Medical College situation in Texas has been taken. The State Board of Medical Examiners now stands between the people and the licensing of incompetents. As yet its power is only a selective one among applicants, it has no direct influence over medical colleges. Schools may be chartered and die, graduates of any number and quality may be given diplomas, students of all shades of illiteracy or scholarship may be matriculated. School authorities are now only governed by their financial needs, or by a desire for scholarly recognition among the profession or by fear of poor records before the State Examining Board. Without question the latter factor furnishes the Board with a decided, though indirect influence, tending to the elevation of entrance requirements and the quality of instruction.

Alcoholic Nostrums Held to be Beverages

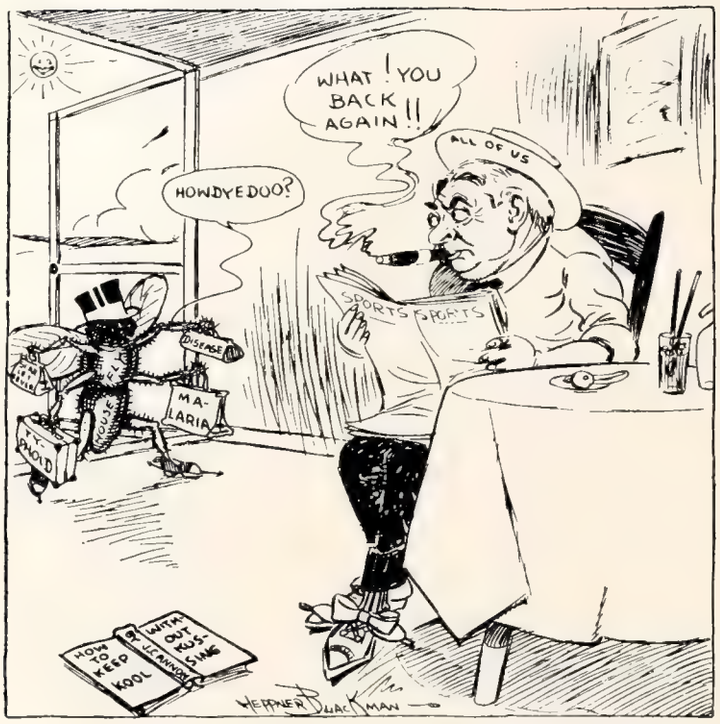
November, 1905—The commissioner of internal revenue has revised the time-honored decision governing alcoholic medicines. The revenue collectors have been notified that after December 1st manufacturers, druggists, and merchants must hold a liquor license to deal in the various alcoholic compounds now sold as medicine under the name of whisky, bitters, tonics, cordials, etc. The decision includes articles "composed of distilled spirits, even though drugs are declared to have been added thereto, when their presence is not discoverable by chemical analysis or it is found that the quantity of drugs in the preparation is so small as to have no appreciable effect on the alcoholic liquor of which the compound is mainly or largely composed."

A large part of Texas is under the local option law. In such communities the prescription case drinks and the back room drunks will be eliminated. In the larger cities without local option laws, one or two drug-

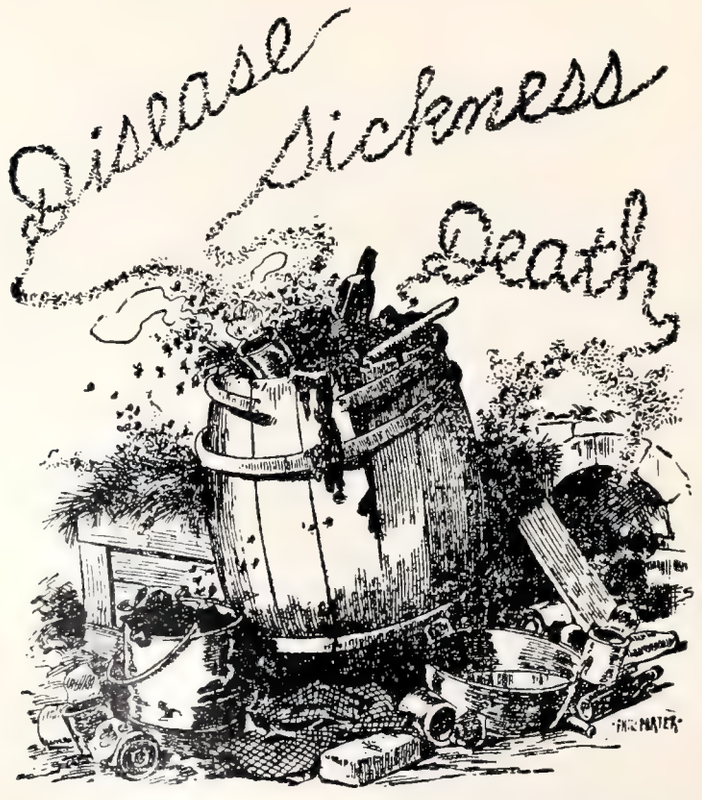
Editor's note: Many have looked into the past this Bicentennial year for a perspective on the present and a prediction of the future. Here, from the past pages of the *Texas State Journal of Medicine*, now *Texas Medicine*, are stories illustrating the gigantic strides made by the medical profession in past decades to assure quality health care to the citizens of this state. The cartoons appearing on pages 100 and 102 are selections from an early journal column, "Cartoons of the Month."

OUR EDITOR

Lieutenant Colonel Holman Taylor, 143rd Infantry, 36th Division, A.P.O. 796, American Expeditionary Forces, France, now in the advance lines near Sedan. Field equipment, French atmosphere, American spirit.



—Fort Worth Star-Telegram



—Houston Chronicle

gists may be expected to qualify as liquor dealers and will monopolize the business. The nostrum manufacturers are bringing great influence to bear to modify or reverse the ruling. Failing in this, it is said they will drug their preparations with harmless ingredients sufficiently to qualify under the decision.

Harrington's Solution

December, 1909—Dr. Charles Harrington, of Boston, in 1904 reported the results of experiments with combined antiseptics, and found that the germicidal action of combinations of antiseptics was much superior to the action of any of the single constituents. These investigations resulted in the production of the so-called Harrington's Solution, which is generally coming into use for the sterilization of the hands and fields of operation. We have been so frequently asked concerning the composition of the solution and its nature and value that we publish in another column a portion of Harrington's original paper telling the results of experimentation and the composition of the antiseptic mixture now bearing his name.

The Popular Hospital Movement

April, 1910—In the last few years there has been an awakening among physicians as to the need for hospitals. A multitude of private hospitals have been erected, and religious orders have founded some magnificent institutions. These fill an important place but fall far short of popular needs. Authorities say there should be a hospital bed for every one hundred people in a community. Texas towns and cities now have from one bed for a thousand people to one bed for every 200 in the best provided towns. The erection and equipment of a good hospital cannot cost much less than $1,000 a bed; thus a 35-bed municipal and county hospital would cost $35,000, which forms a convenient basis for estimation. A well equipped hospital will require about twice as many rooms as there are rooms for patients, varying with the ward and private room plans.

The cost of maintenance in the most economically managed public hospitals may be placed at an average of $1.25 per day. A hospital with charity, popular and high priced accommodations, after erection and equipment, may be made practically self sustaining, by the pay rooms earning enough to care for the charity and popular wards. This leaves no reason why every community should not demand a popular hospital.

How Does Your Candidate Stand on Public Health Questions?

May, 1914—We have carefully scanned the columns of speeches on public issues recently published, and nowhere do we find reference to the all important question of the public health. The prohibition question, rural credits, the penal system and the like, are all important, and we are glad to know how the candidates for governor and legislative offices stand on those questions; but we should know, before we can vote intelligently, what they think about taking our hospitals for the insane out of politics, bringing our sanitary laws up to date, clearing our jails of the unfortunate insane, providing public school health inspection, and maintaining the present high standard of requirements for the practice of medicine; whether they believe in granting opticians the right to practice medicine under a special law disguised by the term optometry, and whether they believe the great medical profession of this State stands for honest and intelligent policies in public health law-making.

Our Noble 'Six Hundred'

September, 1917—The great patriotic appeal of the Nation to the medical profession, for the care of the lives of American soldiers, still continues unabated. Accurate data is always about a month behind. On August 8th, 634 Texas doctors had applied for military service and 517 commissions had been issued, proportioned as follows: 5 Majors, 48 Captains and 464 1st Lieutenants. Applications are now beginning to drag, but to date we estimate that about 600 commissions have been recommended out of some 800 applications. We publish in this issue the names and addresses of 585, who are known to have been commissioned from Texas to date. The appeal to the medical profession is just beginning if the war is to continue.

Influenza a World Plague

February, 1919—According to a writer in the London Times, 6,000,000 persons throughout the world perished from influenza and pneumonia during the last several months. It is estimated that the war caused the death of 20,000,000 persons in four and a half years, showing that influenza has been, proportionately, almost four times deadlier than the war.

Seven Tons of Barbecue

March, 1926—Seven tons of barbecue for American Medical Association Meeting are being prepared by Dr. John H. Dean of Dallas, according to a dispatch from the Dallas News. The meat for this barbecue will be selected from baby beeves on Dr. Dean's own ranch near Lamesa. It will take eighty calves to furnish the estimated seven tons of baby beef to satisfy the 10,000 lusty appetites belonging to that number of guests expected to be present at the barbecue. It seems that Dr. Dean is literally leaving no stick unturned to insure the success of the barbecue, for he is not only furnishing the meat for it, but is having hickory and pecan trees cut down on his Navarro County farm and the wood seasoned in order to furnish the right kind of heat and smoke to give the juicy beef the proper Texas flavor, in order that the visitors, especially those from the North and East, may know that real Texas barbecue is indeed food for the gods.

Department of Commerce Recognizes Scientific Medicine

March, 1930—The House of Delegates of the American Medical Association, during its Portland session, last July, adopted resolutions commending the Aeronautics Branch

—Fort Worth Star-Telegram

Sacrifice everything to the hallucination of a low tax rate.

—Houston Post

of the Department of Commerce for the practical and scientific way in which it proceeded to organize a medical service for the new and potentially dangerous method of transportation, flying. The physical standards adopted have been uniformly, so we are informed, according to the dictates of that part of science pertaining to such matters, and the physicians designated to determine the physical condition of prospective pilots are selected solely from among those holding the degree of Doctor of Medicine, and the very highest type obtainable at that.

Major General Lull Keynotes 'Medics' 170th Anniversary

September, 1945—The Army Medical Department from the four corners of the earth celebrated its 170th anniversary July 27, as press and radio services of this country joined hands to pay tribute to the achievements of "the medics."

Keynoting the festivities, Deputy Surgeon General George F. Lull in an address from Valley Forge called attention to the fact that today's Medical Department, more than one-half million strong, is gearing itself to new high standards in the care of America's sick and wounded at home and abroad.

"We are justifiably proud of our World War II record of returning nearly ninety-seven of every hundred of our disabled soldiers to duty," General Lull said. Speaking from the birthplace of the Medical Department, General Lull told how the Continental Congress acted upon General George Washington's request in 1775 that a Medical Department be organized because "the lives and health of both officers and men so much depend on a due regulation of this department."

Predicting even greater advances in the future, the Deputy Surgeon General pointed out that the peak load of Medical Department activity would not be reached until this fall.

Leaders in all sections of the country publicly praised the medics, and appropriate programs were held at hospitals and medical installations.

Medical Newsmakers

AFTER 24 years of public service, DR. M. S. DICKERSON, chief, Bureau of Communicable Disease Services, Texas Department of Health Resources, will retire effective Aug 31. In addition to being the official state epidemiologist, he has guided the implementation of the compulsory school immunization program wherein 95-98% of all school children are fully immunized against the immunizable diseases. Also to his credit are the direction of the statewide venereal disease eradication program, the design for the nationally recognized leprosy control program for Texas, and direction of innumerable investigations of disease outbreak. Dr. Dickerson joined the department following ten years in private medical practice in Midland and six years as a medical missionary in the Belgian Congo. He will remain in Austin following his retirement.

PHILIP R. OVERTON, general counsel for the Texas Medical Association for the past 37 years, received the first honorary degree awarded by the Texas Tech University School of Medicine June 6. Dr. Grover E. Murray, president of Texas Tech University and its School of Medicine, conferred the degree during the school's graduation convocation.

DR. WILLIAM T. BUTLER has been appointed acting vice president of Baylor College of Medicine, Houston, during the sabbatical of Dr. Joseph M. Merrill, dean. Dr. Butler is now dean of admissions and professor, microbiology and immunology. In this position, he is responsible for the office which provides administrative support in the selection of students applying to Baylor. He had previously been associate dean for admissions, named when the office was established in July, 1973.

A NEW head of the Department of Pathology at the University of Texas M D Anderson Hospital and Tumor Institute has been appointed. DR. FREDERICK F. BECKER is the second head of the department in the history of M D Anderson, replacing Dr. William O. Russell who retired this year after serving in that post since 1948. Prior to his move to Houston, Dr. Becker was professor of pathology at New York University School of Medicine and director of pathology and laboratories at Bellevue Hospital Medical Center in New York City.

Dr. Dickerson

Mr. Overton

DR. TIMOTHY CARIS, professor of medicine and family practice at The University of Texas Health Science Center at San Antonio, has been named associate dean for continuing medical education. He succeeds Dr. Paul Cutler, professor of medicine, who resigned the post early this year for health reasons. Dr. Caris has been at the health science center since 1970 and in addition is associate chief of staff for ambulatory care at the Audie Murphy Veterans Administration Hospital.

JAMIE CLEMENTS of Temple, has been elected chairman of the State Welfare Board. He has served as legal counsel to the Scott and White Clinic for 15 years. Clements succeeds George Butler who resigned after five years on the board. PAUL JIMENEZ of San Antonio has been named to the board.

A specialist in chemotherapy at The University of Texas M D Anderson Hospital and Tumor Institute presented the seventh annual David A. Karnofsky memorial lecture May 5 in Toronto. DR. EMIL J. FREIREICH delivered an address entitled "Who Took the 'Clinical' out of 'Clinical Research': Mouse or Man?" in which he discussed the opportunities and limitations of clinical research. The Karnofsky lecturship and accompanying award is given each year to honor the late chief of the division of chemotherapy research and the medical oncology service at what is now Memorial Sloan-Kettering Cancer Center.

BETTY JO HAY of Dallas, a member of the Coordinating Board, Texas College and University System, recently was elected to the select board of the Council on Postsecondary Accreditation. Ms. Hay is one of only nine public members and the only Texan named to the national board. Long active in statewide efforts to support mental health education, Ms. Hay is a member of the boards of the Texas Association of Mental Health and the Dallas County Mental Health Association. She was appointed to a six-year term on the Coordinating Board in September, 1973.

DR. RANDALL K. HOLMES, associate professor of internal medicine and associate director of the division of infectious diseases at The University of Texas Health Science Center at Dallas, has been appointed chairman of the Department of Microbiology and professor of microbiology and internal medicine at the new Uniformed Services University of the Health Sciences in Bethesda, Md, effective Sept 1.

DR. C. HUNTER MONTGOMERY, Houston, has been named to the Board of Directors of the American Occupational Medical Association. He is one of five physicians elected to a three-year term on the board. Dr. Montgomery is assistant medical director of Exxon Company, USA, and clinical assistant professor in the Department of Medicine at Baylor University College of Medicine.

DR. JACK REYNOLDS, professor and vice chairman of radiology at The University of Texas Health Science Center at Dallas, has been named one of the state's ten outstanding teachers by the Minnie Stevens Piper Foundation. The foundation cited Dr. Reynolds for his scientific and scholarly achievement and for his dedication to the teaching profession. Dr. Reynolds has been on the faculty of Southwestern since 1957.

Fort Worth gynecologist DR. JACK L. TURNER has been elected to the Fort Worth School Board, capturing more than 60% of the vote in a runoff election in May. He will complete the four remaining years in the term of the former board president who resigned in March. Commenting on his election, Dr. Turner said he believes physicians should become involved in community activities. In addition, Dr. Turner is active in the volunteer physician movement and plans his 25th volunteer tour of service abroad this year.

DR GEORGE E. WHALEN has been named acting chairman of the Department of Medicine at The University of Texas Health Science Center's Medical School at Houston. He will serve until a successor is selected to Dr. Walter Kirkendall, former medicine department chairman who resigned April 1. Dr. Whalen has been professor of medicine and director of the Division of Gastroenterology at the school since July 1975.

Former vice president for public affairs at North Texas State University JACK D. WHEELER has become executive assistant to Dr. Charles C. Sprague, president of The University of Texas Health Science Center. He had been with North Texas since 1965.

"We haven't designed a recommended portfolio for a man $50,000 in debt."

consider the effect on coexisting diabetes when you prescribe a vasodilator*

(POSTERIOR VIEW OF PANCREAS)

no interference in the management of the diabetic patient has been reported with

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TABLETS, 20 mg.

the compatible vasodilator

*__Indications:__ Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500, 1000, 5000 and Unit Dose.

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Medicine in literature

THE RED EYE PART I, (slide presentation), Medcom, 1972, 105 color slides, 2x2.
Discusses the differential diagnosis of mechanical injury. Accompanying monogram.

THE RED EYE PART II, (slide presentation), Medcom, 1972, 105 color slides, 2x2.
Focuses on inflammatory processes and glaucoma in the etiology of the red eye. Accompanying monogram.

RENAL PATHOLOGY PART I, (slide presentation), Medcom, 1972, 100 color slides, 2x2.
Focuses on the pathology of the kidney, ureter, bladder and male genitalia. Accompanying monogram.

RENAL PATHOLOGY PART II, (slide presentation), Medcom, 1974, 100 color slides, 2x2.
Delves deeply into a broad discussion of the pathology of glomerulonephritis. Accompanying monogram.

RENAL PATHOLOGY PART III, (slide presentation), Medcom, 1972, 100 color slides, 2x2.
Illustrates a variety of generalized diseases that may cause serious kidney disturbances.

IN THE TMA LIBRARY

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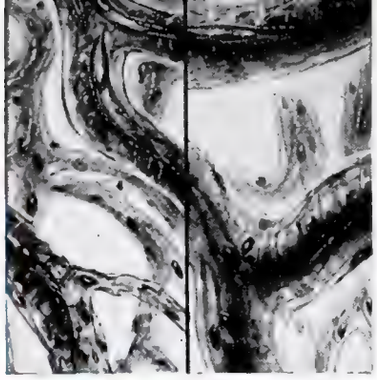
"He makes a million a year by being aphasic."

When women outlive their ovaries...



The menopausal "flush" is believed to result from an autonomic nervous system imbalance due to estrogen deficiency. Here, illustration shows artist's interpretation of "normal" vs. dilated arteriole-capillary-venule network.

"It seemed like I was having one flush after another. It wasn't just a nuisance... it was a real problem."

The menopausal flush is the classic sign of estrogen deficiency...generally recognized as a clear indication for treatment.

"The flushes were bad enough... but the sweats at night were almost too much."

This wasn't always the case.

There was a time when the symptoms of the menopause went untreated...when women were expected to suffer the severe flushes and sweats of estrogen deficiency in silence or, at best, with a minimum of encouragement and understanding.

Now, with effective estrogen replacement therapy, women do not have to endure these distressing symptoms. In the great majority of cases, PREMARIN (Conjugated Estrogens Tablets, U.S.P.) can promptly control such vasomotor symptomatology...provide classic relief for classic symptoms during a troublesome period of physiologic adjustment.

Three studies have reported an increased risk of endometrial carcinoma in association with the postmenopausal administration of exogenous estrogens. For further information see "Warnings" in prescribing information.

For the classic symptoms of the menopause

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BRIEF SUMMARY
(For full prescribing information, see package circular.)
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Actions: Estrogens are responsible for development and maintenance of the female reproductive system and secondary sex characteristics. They cause the growth and development of the vagina, uterus, and fallopian tubes, and enlargement of the breasts. Indirectly, they contribute to the shaping of the skeleton, maintenance of tone and elasticity of urogenital structures, changes in the epiphyses of the long bones that allow for pubertal growth spurt and termination, growth of axillary and pubic hair, and pigmentation of the nipples and genitals. Estrogens are also involved in psychologic and emotional aspects of feminine behavior. As estrogen levels increase during the menstrual cycle, there is a sense of vigor and well-being, and in the menopausal period estrogens aid in relieving nervous symptoms (*e.g.* anxiety, depression and irritability) due to estrogen deficiency. Decline of estrogenic activity at the end of the menstrual cycle can bring on menstruation, although the cessation of progesterone secretion is the most important factor in the mature ovulatory cycle. However, in the pre- or non-ovulatory cycle, estrogen is the primary determinant in the onset of menstruation. Estrogens do not induce ovulation.

Estrogens affect calcium and phosphorus metabolism, and are involved in maintenance of normal bone structure. In prolonged estrogen deficiency states, administration of estrogen acts to prevent associated bone degenerative changes.

Estrogens appear to be responsible for the relatively greater amount of alpha-lipoprotein and correspondingly lower amount of beta-lipoprotein found in premenopausal women as compared with men.

Estrogens affect the release of pituitary gonadotropins and may also deplete the gonadotropic content of the pituitary.

Indications: Based on a review of PREMARIN Tablets by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications for use as follows:
Effective: As replacement therapy for naturally occurring or surgically induced estrogen deficiency states associated with: the climacteric, including the menopausal syndrome and postmenopause; senile vaginitis and kraurosis vulvae, with or without pruritus.
"Probably" effective: For estrogen deficiency-induced osteoporosis, and only when used in conjunction with other important therapeutic measures such as diet, calcium, physiotherapy, and good general health-promoting measures. Final classification of this indication requires further investigation.

Contraindications: Short acting estrogens are contraindicated in patients with (1) markedly impaired liver function; (2) known or suspected carcinoma of the breast, except those cases of progressing disease not amenable to surgery or irradiation occurring in women who are at least 5 years postmenopausal; (3) known or suspected estrogen-dependent neoplasia, such as carcinoma of the endometrium; (4) thromboembolic disorders, thrombophlebitis, cerebral embolism, or in patients with a past history of these conditions; (5) undiagnosed abnormal genital bleeding.

Warnings: Three separate studies have reported an increased risk of endometrial carcinoma in association with the postmenopausal administration of exogenous estrogens. Smith *et al.*[1] retrospectively compared the records of 317 patients with endometrial carcinoma with the records of an equal number of contrast patients having cervical, ovarian, or vulvar neoplasms. The unadjusted relative risk estimate of endometrial cancer was 4.5 times greater in women exposed to estrogen therapy. The type of estrogen used, the preparation, and the dosage were not considered in this study. These factors may play a role in modifying the average relative risk found in this study. The authors also suggested that there may be a relationship between increasing risk and the duration of administration; however, the data are not conclusive on this point. A second retrospective study reported by Ziel and Finkle[2] examined the records of 94 patients with endometrial carcinoma and those of a two-fold contrast series from the same health plan population. The estimate of relative risk was found to be 7.6. In addition, the authors reported a relative risk estimate of 5.6 for a duration of exposure of 1 to 4.9 years, and 13.9 for exposure of 7 or more years. In this study, conjugated estrogens were reported to be the type of estrogen used. Mack *et al.*[3] retrospectively studied 63 cases of endometrial carcinoma and a four-fold contrast group. The relative risk of endometrial carcinoma was estimated to be 8.0 for any estrogen usage, and 5.6 for conjugated estrogen usage. The relationship between relative risk and duration of use could not be conclusively described from the data in the study.

Estrogen therapy should not be given to women with recurrent chronic mastitis or abnormal mammograms except, if in the opinion of the physician, it is warranted despite the possibility of aggravation of the mastitis or stimulation of undiagnosed estrogen-dependent neoplasia.

The physician should be alert to the earliest manifestations of thrombotic disorders (thrombophlebitis, retinal thrombosis, cerebral embolism and pulmonary embolism). If these occur or are suspected, estrogen therapy should be discontinued immediately.

Estrogens may be excreted in the mother's milk and an estrogenic effect upon the infant has been described. The long range effect on the nursing infant cannot be determined at this time.

Hypercalcemia may occur in as many as 15 percent of breast cancer patients with metastases, and this usually indicates progression of bone metastases. This occurrence depends neither on dose nor on immobilization. In the presence of progression of the cancer or hypercalcemia, estrogen administration should be stopped.

A statistically significant association has been reported between maternal ingestion of diethylstilbestrol during pregnancy and the occurrence of vaginal carcinoma in the offspring. This occurred with the use of diethylstilbestrol for the treatment of threatened abortion or high risk pregnancies. Whether or not such an association is applicable to all estrogens is not known at this time. In view of this finding, however, the use of any estrogen in pregnancy is not recommended.

Failure to control abnormal uterine bleeding or unexpected recurrence is an indication for curettage.

Precautions: As with all short acting estrogens, the following precautions should be observed:

A complete pretreatment physical examination should be performed with special reference to pelvic and breast examinations. Such physical examinations should be repeated at regular intervals, at least annually, during estrogen therapy.

To avoid prolonged stimulation of the endometrium and breasts in climacteric or hypogonadal women, estrogens should be administered cyclically (3 week regimen with 1 week rest period—withdrawal bleeding may occur during rest period).

Because of individual variation in endogenous estrogen production, relative overdosage may occur which could cause undesirable effects such as abnormal or excessive uterine bleeding, mastodynia and edema.

Because of salt and water retention associated with estrogenic anabolic activity, estrogens should be used with caution in patients with epilepsy, migraine, asthma, cardiac, or renal disease.

If unexplained or excessive vaginal bleeding should occur, reexamination should be made for organic pathology.

Estrogen usage may cause preexisting fibromyomata to increase in size; therefore, patients should be examined at regular intervals while receiving estrogenic therapy.

The pathologist should be advised of estrogen therapy when relevant specimens are submitted.

Because of their effects on epiphyseal closure, estrogens should be used judiciously in young patients in whom bone growth is incomplete.

Prolonged high dosages of estrogens will inhibit anterior pituitary functions. This should be borne in mind when treating patients in whom fertility is desired.

The age of the patient constitutes no absolute limiting factor, although treatment with estrogens may mask the onset of the climacteric.

Certain liver and endocrine function tests may be affected by exogenous estrogen administration. If test results are abnormal in a patient taking estrogen, they should be repeated after estrogen has been withdrawn for one cycle.

Adverse Reactions: The following adverse reactions have been reported associated with short acting estrogen administration:
nausea, vomiting, anorexia
gastrointestinal symptoms such as abdominal cramps and bloating
increased incidence of gallbladder disease
breakthrough bleeding, spotting, unusually heavy withdrawal bleeding (See DOSAGE AND ADMINISTRATION)
breast tenderness and enlargement
reactivation of endometriosis
possible diminution of lactation when given immediately postpartum
loss of libido and gynecomastia in males
edema
aggravation of migraine headaches
change in body weight (increase, decrease)
headache
allergic rash
hepatic cutaneous porphyria becoming manifest

Dosage and Administration: PREMARIN (Conjugated Estrogens Tablets, U.S.P.) should be administered cyclically (3 weeks of daily estrogen and 1 week off). There should be an annual reassessment of the patient to determine the need for continued estrogen therapy. This assessment may be assisted by lowering the dose and observing the symptoms to determine correct maintenance dosage for continued therapy.

Menopausal Syndrome—1.25 mg daily, cyclically. Adjust dosage upward or downward according to severity of symptoms and response of the patient. For maintenance, adjust dosage to lowest level that will provide effective control.

If the patient has not menstruated within the last two months or more, cyclic administration is started arbitrarily. If the patient is menstruating, cyclic administration is started on day 5 of bleeding. If breakthrough bleeding (bleeding or spotting during estrogen therapy) occurs, increase estrogen dosage as needed to stop bleeding. In the following cycle, employ the dosage level used to stop breakthrough bleeding in the previous cycle. In subsequent cycles, the estrogen dosage is gradually reduced to the lowest level which will maintain the patient symptom-free.

Postmenopause—as a protective measure against estrogen deficiency-induced degenerative changes (*e.g.* osteoporosis, atrophic vaginitis, kraurosis vulvae)—0.3 mg to 1.25 mg daily and cyclically. Adjust dosage to lowest effective level.

Osteoporosis (to retard progression)—usual dosage 1.25 mg daily and cyclically.

Senile Vaginitis, Kraurosis Vulvae with or without Pruritus—0.3 mg to 1.25 mg or more daily, depending upon the tissue response of the individual patient. Administer cyclically.

How Supplied: PREMARIN (Conjugated Estrogens Tablets, U.S.P.)
No. 865—Each *purple* tablet contains 2.5 mg, in bottles of 100 and 1,000.
No. 866—Each *yellow* tablet contains 1.25 mg, in bottles of 100 and 1,000. Also in unit dose package of 100.
No. 867—Each *red* tablet contains 0.625 mg, in bottles of 100 and 1,000. Also in unit dose package of 100.
No. 868—Each *green* tablet contains 0.3 mg, in bottles of 100 and 1,000.

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RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

N. P. Dittrick
Houston, 1944-1976

C. E. Hicks
Hereford, 1926-1976

C. D. Kerr
Houston, 1904-1976

C. P. Lipscomb
Fort Worth, 1906-1976

W. P. Shelton
Dallas, 1905-1976

W. A. Stiles
Dallas, 1899-1976

S. H. Townsend
Childress, 1900-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. Dittrick

Dr. Hicks

Dr. Kerr

Dr. N. P. Dittrick

A Houston physician, Dr. Norman Paul Dittrick, was killed in an automobile accident Feb 13, 1976.

Dr. Dittrick, 31, was a family physician, and had practiced in Houston since 1970.

The native of Dallas attended North Texas State University, Denton, prior to entering The University of Texas Medical Branch, Galveston, in 1965.

Following his graduation from medical school in 1969, Dr. Dittrick was an intern at Memorial Baptist Hospital, Houston.

His professional memberships included the American Academy of Family Physicians, Harris County Medical Society, and American Medical Association.

Dr. Dittrick is survived by his wife, Sandra Marshall Dittrick, and daughters, Carolyn and Barbara Dittrick, all of Houston; and mother, Mrs. Marjorie Dittrick, Dallas.

Dr. C. E. Hicks

Dr. Clarence Edwin Hicks, 50, of Hereford, Tex, died Feb 22, 1976, following a car-truck accident.

Dr. Hicks, a cardiologist and internist, was a native of Oak Hill, WVa. He was graduated from West Virginia University and the Virginia Commonwealth University, Medical College of Virginia. His internship and residency were at Henry Ford Hospital, Detroit. He also served residencies at Mercy and Denver General hospitals, both in Denver.

Dr. Hicks served in the US Air Force during World War II. He practiced in Kentucky before moving to Hereford in 1958.

The doctor's professional memberships included the Tierra Blanca (Deaf Smith-Parmer-Castro-Oldham-Swisher) County Medical Society, the American Medical Association, and American Society of Internal Medicine. While in Kentucky, he had served as president of his county medical society.

Surviving Dr. Hicks are his wife, Agnes Hunt Hicks, Hereford; three sons, Dennis Hicks, Germany; David Hicks, San Marcos; and Gary Hicks, Arlington; his mother, Mrs. Bessie Hicks, Ronceverte, WVa; and a brother, Donald Hicks, Billings, Mont.

Dr. C. D. Kerr

Dr. Charles Denton Kerr of Houston, a past president and former member of the Board of Trustees of Texas Medical Association, died March 19, 1976, at the age of 72.

Dr. Kerr was born on a farm near Bronson, Tex. When he was graduated from Rosevine High School in Sabine County, he became a teacher in Pine Hill, Tex; three years later he became principal at Rosevine. During the spring and summer months of his teaching career, Dr. Kerr took premedical courses at Stephen F. Austin State College, Nacogdoches.

After obtaining his BA degree, Dr. Kerr entered The University of Texas Medical Branch, Galveston, and was graduated in 1933. His internship was at Hermann Hospital, Houston, and his residency was at various military hospitals.

Dr. Kerr's entire medical career was spent in Houston with the exception of some 40 months with the Army Air Corps as a major during World War II, and a period in 1946 of postgraduate work at Duke Hospital in Durham, NC. He retired from the practice of gynecology in 1975.

Dr. Kerr's professional activities were international. In 1953, he was appointed by the US State Department to attend the Second All-Pakistan Medical Conference at King Edward Medical College in Lahore, Pakistan, as a representative of the American Medical Association. In 1951, he was appointed to an advisory committee to im-

prove federal medical aid, an affiliate of the Citizens Committee for the Hoover Report.
He also was active in health projects at the local level. He was a former chairman of the Houston city health board; member and president of the board of directors of the Sam Houston Area Council, Boy Scouts of America; executive committeeman and past co-chairman of the Houston United Fund Drive; former board member and an honorary life member of the Houston Chamber of Commerce; and a member of Rotary and the Masons.
Additionally, Dr. Kerr was a former member of the faculty of Baylor College of Medicine, a diplomate of the American Board of Obstetrics and Gynecology, a fellow of the American College of Surgeons and of the American College of Obstetrics and Gynecology, a member of the Central Association of Obstetricians and Gynecologists and the American Medical Association, and a past president of the Harris County Medical Society and the Association of American Physicians and Surgeons.
Surviving Dr. Kerr are his wife, Mildred Marques Kerr, Houston; a son, Robert Denton Kerr, Houston; a brother, Thurman Kerr, Alvin; two sisters, Jewel Drawhorn and Lou T. Baldree, both of Rosevine, and three grandchildren.

Dr. C. P. Lipscomb

Dr. Cuvier Paschall Lipscomb, 69, Fort Worth orthopedic surgeon, died Jan 4, 1976, at his home.
Dr. Lipscomb practiced in Fort Worth from 1948 until his retirement in March, 1975.
He was a native of Denton, where his grandfather had practiced medicine. Dr. Lipscomb was graduated from Baylor University, Waco, in 1929. He taught school in Cross Plains and Rochester for five years before entering Baylor College of Medicine in 1934. He received his MD in 1938. His internship was at Baylor Hospital, Dallas (1938-39).
Dr. Lipscomb had the industrial medical contracts for Possum Kingdom and Denison Dams for two years before joining the Army Air Corps in 1942. He served throughout World War II as a flight surgeon in the North Atlantic area.
At the close of the war, Dr. Lipscomb returned to Dallas, where he held residencies at Baylor, Parkland Memorial and Texas Scottish Rite hospitals.
In 1954, he joined two associates in forming the Fort Worth Bone and Joint Clinic.
The doctor's professional memberships included the American Academy of Orthopaedic Surgeons (fellow), the Tarrant County Orthopaedic Association, Tarrant County Medical Society, American Medical Association, and Texas Academy of Orthopaedic Surgeons. He also was a past president of the North Texas Orthopaedic Society.
Surviving are his wife, Mary Long Lipscomb; sons, Cuvier P. Lipscomb IV, and Dr. Thomas S. Lipscomb; daughter, Mrs. Cindy Jones, all of Fort Worth; a brother, Dr. Joe L. Lipscomb, Amarillo; and six grandchildren.

Dr. Lipscomb

Dr. Shelton

Dr. W. P. Shelton

Dr. William Prior Shelton, a Dallas psychiatrist, died March 17, 1976.
Dr. Shelton was a clinical assistant professor of psychiatry at The University of Texas Southwestern Medical School, as well as a consultant in psychiatry at Baylor University Medical Center and at Parkland Memorial Hospital, Dallas.
He was born in Kansas City, Mo, and was graduated from the University of Missouri in 1925. He received his medical degree in 1929 from Washington University School of Medicine in St. Louis. Graduation from medical school was followed by an internship at Kansas City General Hospital, Mo.
Dr. Shelton held residencies at Barnes Hospital, St. Louis; the Neurological Hospital, Kansas City, Mo; and the Colorado Psychiatric Hospital, Denver.
He was in practice from 1931 to 1941 in Kansas City, and was an instructor at the University of Kansas School of Medicine.

Dr. Townsend

During World War II, the doctor served in the Army. He served for two years in the Asiatic-Pacific area, and later was Chief of the Officer's Neurology and Psychiatry Section at Brooke Army Medical Center, San Antonio.

Dr. Shelton was an organizer and past president of the Dallas-Fort Worth Neuropsychiatric Association, and a past vice-president of the Dallas Southern Clinical Society. His other memberships included the American College of Physicians (fellow), American Psychiatric Association (fellow), American College of Psychiatrists, Dallas County Medical Society, and American Medical Association. He was also a past secretary-treasurer and president of the Central Neuropsychiatric Association.

In addition to these activities, Dr. Shelton was active in the Boy Scouts of America. In 1975, he received the Silver Antelope Award for his leadership of the Circle 10 Council since 1954.

Dr. Shelton is survived by his wife, Janice M. Shelton; son, William E. Shelton; daughter, Mrs. Susan Stokes; and a granddaughter, all of Dallas.

Dr. W. A. Stiles

Dr. Wendel Arthur Stiles, an honorary member of both Texas Medical Association and the Dallas County Medical Society, died March 20, 1976, in Dallas.

Dr. Stiles, 74, began his Dallas family practice in 1930. In 1951, he was named to the Texas State Board of Medical Examiners by former Governor Beauford H. Jester.

The physician was born in Gainesville, Tex. He received his undergraduate degree from Texas A&M University in 1923 and his medical degree from Hahnemann Medical College of Philadelphia in 1927. His internship was at Genesee Hospital, Rochester, NY.

During World War II, Dr. Stiles served in the Army Medical Corps for five years. He was discharged as a lieutenant colonel in 1946. At that time, he returned to Texas and began an internal medicine practice, which he maintained until his retirement in 1973.

Dr. Stiles had been a member of the American Medical Association since 1930.

There were no survivors.

Dr. S. H. Townsend

Dr. Shell Hughes Townsend, 75, of Childress, died March 1, 1976. He retired from the general practice of medicine in 1970.

Dr. Townsend was active in civic as well as professional endeavors. He was the originator and president of the Greenbelt Municipal and Industrial Water Authority, which provides water to West Texas area communities.

In 1927, Dr. Townsend helped found the Jeter-Townsend Hospital. He and an associate operated the hospital until 1944, when it was purchased by Childress County. Dr. Townsend then helped build the Jeter-Townsend Clinic, where he practiced until 1970.

Dr. Townsend, a native of Mangum, Okla, attended the University of Oklahoma. In 1924, he was graduated from Northwestern University Medical School, Chicago. His internship and residency were at Charity Hospital of Louisiana, New Orleans. In 1926 he was involved in postgraduate studies at the Mayo Clinic, Rochester, Minn. He moved to Childress in 1928.

The surgeon and family practitioner was a past president of Rotary and a former school board member. He was named the Outstanding Man of the Year in 1963 by the Childress Chamber of Commerce.

Dr. Townsend also was a past president of the Greenbelt (Armstrong-Donley-Childress-Collingsworth-Hall-Wheeler) County Medical Society, an honorary member of TMA, and a member of the American Medical Association.

Surviving Dr. Townsend are his wife, Enid Robson Townsend, Childress; a daughter, Mrs. Mary Ann Hunter, Lubbock; a son, John Townsend, Okeechobee, Fla; and three grandchildren.

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Testing in Humans: Who, Where & When.

the weight of ethical opinion:

Few would disagree that the effectiveness and safety of any therapeutic agent or device must be determined through clinical research.

But now the *practice* of clinical research is under appraisal by Congress, the press and the general public. Who shall administer it? On whom are the products to be tested? Under what circumstances? And how shall results be evaluated and utilized?

The Pharmaceutical Manufacturers Association represents firms that are significantly engaged in the discovery and development of new medicines, medical devices and diagnostic products. Clinical research is essential to their efforts. Consequently, PMA formulated positions which it submitted on July 11, 1975, to the Subcommittee on Health of the Senate Labor and Public Welfare Committee, as its official policy recommendations. Here are the essentials of PMA's current thinking in this vital area.

1. PMA supports the mandate and mission of the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research and offers to establish a special committee composed of experts of appropriate disciplines familiar with the industry's research methodology to volunteer its service to the Commission.

2. PMA supports the formation of an independent, expert, broadly based and representative panel to assess the current state of drug innovation and the impact upon it of existing laws, regulations and procedures.

3. When FDA proposes regulations, it should prepare and publish in the *Federal Register* a detailed statement assessing the impact of those regulations on drug and device innovation.

4. PMA proposes that an appropriately qualified medical organization be encouraged to undertake a comprehensive study of the optimum roles and responsibilities of the sponsor and physician when company-sponsored clinical research is performed by independent clinical investigators.

5. PMA recognizes that the physician-investigator has, and should have, the ultimate responsibility for deciding the substance and form of the informed consent to be obtained. However, PMA recommends that the sponsor of the experiment aid the investigator in discharging this important responsibility by providing (1) a document detailing the investigator's responsibilities under FDA regulations with regard to patient consent, and (2) a written description of the relevant facts about the investigational item to be studied, in comprehensible lay language.

6. In the case of children, the sponsor must require that informed consent be obtained from a legally appropriate representative of the participant. Voluntary consent of an older child, who may be capable of understanding, in addition to that of a parent, guardian or other legally responsible person, is advisable. Safety of the drug or device shall have been assessed in adult populations prior to use in children.

7. PMA endorses the general principle that, in the case of the mentally infirm, consent should be sought from both an understanding subject and from a parent or guardian, or in their absence, another legally responsible person.

8. Pharmaceutical manufacturers sponsoring investigations in prisons must take all reasonable care to assure that the facilities and personnel used in the conduct of the investigations are suitable for the protection of participants, and for the avoidance of coercion, with a respect for basic humanitarian principles.

9. Sponsors intending to conduct nontherapeutic clinical trials through the participation of employee volunteers should expand the membership and scope of its existing Medical Research Committee, or establish such an internal Medical Research Committee, with responsibility to approve the consent forms of all volunteers, designs, protocols and the scope of the trial. The Committee should also bear responsibility to ensure full compliance with all procedures intended to protect employee volunteers' rights.

10. Where the sponsor obtains medical information or data on individuals, it shall be accorded the same confidential status as provided in codes of ethics governing health care professionals.

11. PMA and its member firms accept responsibility to aid and encourage appropriate follow-up of human subjects who have received investigational products that cause latent toxicity in animals or, during their use in clinical investigation, are found to cause unexpected and serious adverse effects.

12. PMA supports the exploration and development by its member companies of more systematic surveillance procedures for newly marketed products.

13. When a pharmaceutical manufacturer concludes, on the basis of early clinical trials of a basic new agent, that a new drug application is likely to be submitted, a proposed development plan accompanied by a summary of existing data, would be submitted to the FDA. Following a review of this submission, the FDA, and its Advisory Committee where appropriate, would meet with the sponsor to discuss the development plan. No *formal* FDA approval should be required at this stage. Rather, the emphasis should be on identification of potential problems and questions for the sponsor's further study and resolution as the program develops.

The PMA believes that health professionals as well as the public at large should be made aware of these 13 points in its Policy on Clinical Research. For these recommendations envisage constructive, cooperative action by industry, research institutions, the health professions and government to encourage creative and workable responses to issues involved in the clinical investigation of new products.

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WANTED: OPHTHALMOLOGIST with retinal training to share excellent facilities with two other eye men. Near Gulf Coast, 90 miles from Houston. Unopposed in industrial area with over 125,000 population. Please reply to Ad-642, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

HOUSTON AREA PRACTICES. NASA, Kingwood, Sugar Creek and other beautiful suburbs. Excellent schools and hospitals nearby. Live in a beautiful home five minutes from your office. All types recreation except snow and ice sports. Primary care practices needed for rapidly growing Houston area. Some specialty practices also available. Please write with C. V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Kingwood, Texas 77339.

LUBBOCK—INTERNIST TO ASSOCIATE in busy practice. Salary and/or guarantee leading to partnership in one-man corporation. Excellent facilities and modern well-equipped and staffed hospital nearby. Excellent climate and economy. Excellent public school system. Contact H. L. Shepard, M.D., 4809 University, Lubbock, Texas 79412; telephone 806-795-5561.

SIX FPs OR GPs NEEDED in town of 14,000 (30,000 draw). Financial help available. Office space available. Contact Thomas R. Ahrend, M.D., 1501 Hailey Street, Sweetwater, Texas 79556.

Situations Wanted

MARRIED, AGE 37 YEARS. Immigrant visa. Finished three years of residency and one year clinical fellowship in anesthesiology. Have Texas and Georgia medical licenses. Would like to settle in Texas. Board eligible. Available immediately. Call 216-229-2200 ext. 2650 or write Avutu R. Reddy, M.D., Cleveland Clinic, Cleveland, Ohio 44106.

BOARD CERTIFIED, DYNAMIC, ECLECTIC, bi-lingual, 35 year old psychiatrist with ample experience in individual psychotherapy and institutional psychiatry and with excellent recommendations wishes to join partnership in the area of San Antonio, Texas. Please reply to Ad-616, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED DIAGNOSTIC RADIOLOGIST with extensive experience in neuro-radiology, vascular procedures and special procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join hospital based group with private office. Available after three months time. Please reply to Ad-622, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BLUE-CHIP PHYSICIAN ASSISTANT looking for position in Austin or Hill Country area. Two years experience, including surgery. Baylor graduate 1973, Houston, Texas. Please reply to Ad-627, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED OBSTETRICIAN AND GYNECOLOGIST with vast experience in all operative procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join group with private office. Available after three months time. Please reply to Ad-623, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION: 36, board eligible, university trained neurosurgeon. Two years practice experience, microneurosurgery oriented. Licensed in Texas. Seek association, partner, group or solo practice. Available anytime. Please reply to Ad-635, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PATHOLOGIST: Diplomate of the College of American Pathologists, desires position as director or associate. Prefer mid or eastern Texas (either north or south). Have been director of a hospital and private laboratory and ASCP school of medical technology for past 11 years. Am married with children. Available immediately. Phone 405-721-3618.

INTERNIST: 30, ABIM, university trained. Texas license. Desire locum tenens. Army discharge February 1977. Begin civilian fellowship July 1977. Would like two or three months association with practicing internist or group in San Antonio beginning March 1977. Please reply to Ad-639, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, FACS. Canadian boards certified. 36, single, very aggressive, available immediately. Please reply to Ad-640, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, FMG, 34, completed Part I ABS. Total 10 years surgical experience, some chest and vascular. Desires solo, group or associate practice in Texas or Southeastern states. Presently part-time ER. R. Shrivastav, M.D., 1100 West Jeffrey #69, Kankakee, Illinois 60901. 815-937-4169.

PEDIATRICIAN SEEKING LOCATION in Houston area. Married female pediatrician, FMG, university trained, board eligible. Desires position as partner or associate. Will also consider hospital appointment. Available July 1. For further information contact Ad-641, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18287, Dallas, Texas 75218.

OPTICAL COMPANY FOR SALE situated in metropolitan area with gross sales in excess of $225,000, incorporated and enjoys established clientele, glasses and contact lenses dispensed from several offices, personnel including management available to continue operations. Principals only please reply to Ad-597 *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

DOCTORS SUITES, approximately 1,000 square feet at 45c square foot including all bills and janitor. One block to hospital. Heights Med Arts Center, 411 West 21st Street, Houston, Texas. Call Irving Richie, 781-3188 or 862-2562. Write to 2100 Fountain View #29, Houston, Texas 77027.

NEW OFFICE SPACE for lease in northwest San Antonio. One block from Loop 410 and Interstate 10. Will finish out to suit tenant. Contact Mossrock Professional Building, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

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FAMILY PRACTITIONER—ONE OR MORE. Clinic available for lease or sale. Excellent opportunity for one or more physicians in West Texas. Town with a new modern hospital. Contact Robert Herndon, Administrator, Childress General Hospital, P.O. Box 627, Childress, Texas 79201; 817-937-2575.

AUSTIN—NEW OFFICE SPACE FOR LEASE. Cannon Professional Park is a uniquely designed plan for medical and dental offices in South Austin. Located on William Cannon Drive, The Park offers easy accessability to major city arteries and is convenient to hospitals and downtown. Only 3 percent of Austin's total physicians and 12 percent of the dentists practice in this Hill Country setting, since facilities have not kept pace with the accelerated growth. Each office has its own private entrance, with a covered walkway and ample parking. Call or write Cannon Professional Park, c/o 3913 Medical Parkway, Austin, Texas 78756; Phone 512-451-8489.

RETIRING July 1, 1976. Have 8 room office fully equipped. Located short block from hospital. Have x-ray, EKG, Medcosonlator, microscope, typewriter, furniture, and instruments. No money required. You can use my equipment one year free. Have good help. R. J. Van Sickle, M.D., 700 North Fourth Street, Longview, Texas 75601. Phone 214-758-4416 and 214-753-4177 residence.

DOCTORS SUITE FOR LEASE: DALLAS, TEXAS. 16'x70' carpeted, reception room, business office, three private consultation rooms, laboratory, x-ray room with electricity already installed and a dark room. Will redecorate. Reasonable rent. Contact Olan Vickers, Building Manager, 6031 Parkdale, Dallas, Texas 75227. Phone 214-381-4677.

DOCTOR'S OFFICE 2,735 sq. ft. Located 5 minutes from four major hospitals. Three consultation rooms, 5 examining rooms, 3 adjoining baths and dressing rooms, 2 nurses stations, lab with bath, large reception area, office space for two receptionists, stereo music. Large lot, off street parking, yard sprinkler. Contact Dr. Charles Braselton, Jr., 1050 West Dashwood, Fort Worth, Texas 76104; 817-332-7077.

FOR SALE OR LEASE: 3,500 sq. ft. modern clinic in Northwest Austin, a rapidly growing area. Fully equipped with x-ray, extensive lab, 6 fully equipped examining and treatment rooms plus library, business office, 2 carpeted offices, 5 restrooms and such miscellaneous equipment as oxygen resuscitator, IPPB with ultrasonic or air nebulizer, 2 ECG machines, ultrasound treatment machine and many, many other features. This is an ideal set up for 3-5 physicians, active practice goes with it, along with records, good will, etc. The clinic is in beautiful tree covered setting with abundant parking. Can arrange convenient terms. Call 345-0880 or write to 9210 Northgate #213, Austin, Texas 78758, to the attention of S. W. Casner, M.D.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

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Editorials

ON BEING A COUNTY SOCIETY PRESIDENT

"The presidency" is no longer a pleasant honorary and social token bestowed upon some deserving medical society member. The nominal leaders of county medical societies are now charged with responsibilities and duties previously thought to be within the specific purview of medical educators, politicians, medical board examiners, and journalists.

Aside from providing interesting and appropriate educational programs for medical society meetings, the president should encourage and promote other medically oriented programs such as emergency medical training for firemen, police officers, and ambulance personnel; seminars for nursing and allied health personnel; cardiopulmonary resuscitation instruction to lay persons; blood pressure and diabetes detection clinics; science fairs; water safety instruction programs; and any other worthwhile endeavors relating to medical or health matters.

The president, as spokesman for the medical community, should be a resource person for health affairs and should make himself readily available to the press, radio, and television. A friendly relationship with the local newspaper's medical reporter will probably provide the best medical public relations that can be obtained at any price. The president, furthermore, should be prepared to speak at clubs, dinner groups, on television, or anywhere he is asked, on most any medically related subject. If he is not conversant with the subject, he should make a quick study or find a presentable understudy. The idea is to seek exposure, and to represent the medical viewpoint without being abrasive or critical of others.

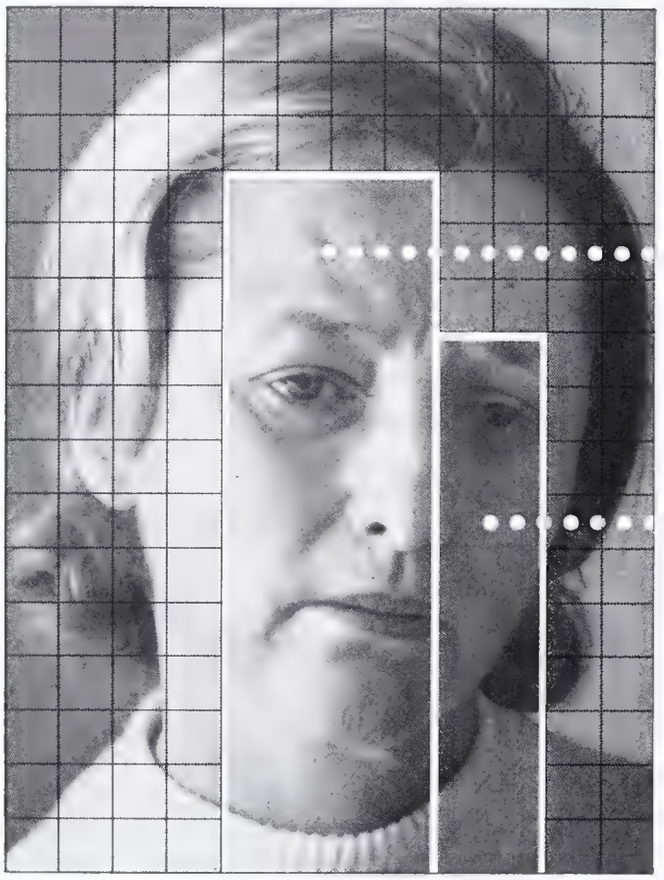
A lot of questions are being asked about Medicare, Medicaid, PSRO's, HMO's, HSA's, medical malpractice, and the like. The president of the medical society can hardly afford to ignore these subjects, and he needs to be able to talk about them easily, authoritatively, and without hesitation. Hence, some education is in order. Fortunately, the Texas Medical Association keeps medical society officers well informed on all pertinent issues of the day, so there is no reason to be unprepared. One of the best ways to gain information, of course, is to serve on committees dealing with these subjects.

The most difficult aspect of a president's job is dealing with wayward members. Professional pride as well as public opinion demand that medical societies police their ranks as never before. Because of the disciplinary impotence of county medical societies, peer pressure is probably the most effective method of maintaining ethical standards. If this fails, the Texas State Board of Medical Examiners may be called to investigate cases of unethical or unprofessional and incompetent work. If fee abuse is known to exist, reporting this to appropriate insurance agencies and to Medicare and Medicaid authorities (or threatening to do so) usually will tame the recalcitrant. Proper documentation and study are essential where such measures are required. Usually, a friendly meeting between the society's executive committee and the offenders will solve the problems. The worst thing that can be done is nothing. It serves no one, least of all the medical society and its members.

To be elected president of a county medical society is still very much an honor, but the position is no longer strictly an honorary one.

Victor E. Schulze, Jr., MD, San Angelo.

Both often



Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequenc and/or severity of grand mal seizures ma require increased dosage of standard anti convulsant medication; abrupt withdrawa may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and mus cle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
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Communication is key to effective action

The Texas Medical Association has been fortunate in having the perceptive leadership of Nym L. Barker, MD, during a time when the professional liability insurance situation reached critical proportions.

Working throughout the year to meet each new crisis, Dr. Barker gained a clear concept of what we physicians must do for ourselves if we hope, once again, to practice medicine to suit our patients' needs rather than to defend ourselves against possible charges we haven't heard yet.

"We have to be realistic," he told TMA delegates in Dallas. Recognizing that we must give full support to TMA's representatives on the Texas Medical Professional Liability Study Commission, Dr. Barker said that we also must get our own program moving.

The delegates already have adopted a policy statement on legislative solutions, but now we need to garner the support we need to accomplish our goals. Dr. Barker outlined some of our tasks; the key idea is communication:

1. Educate the public as to the "medical facts of life," and help everyone to understand that medicine does have limitations and that unsatisfactory results do not necessarily indicate malpractice.
2. Gain support of Texas physicians.
3. Gain support from others who share this crisis.
4. Use every available medium to tell how the malpractice crisis affects physicians and patients.
5. Communicate with every state legislator and state official, letting them know the seriousness of this crisis and how we would like to see it solved.

To coordinate and implement this multifaceted approach to easing the professional liability crisis in Texas, Dr. Barker called for the formation of an ad hoc committee which would have full authority to provide overall direction for the campaign.

The House of Delegates approved, the committee was appointed, and the report of its first meeting appears on page 6 of this issue.

As chairman of the ad hoc committee, and as president of the Texas Medical Association, I seek the understanding and active support of every physician in telling our story. The results of the Texas Medical Professional Liability Survey, published on pages 73-91 of this issue, provide a storehouse of information that will help all of us explain to our patients how and why they are being affected by our insurance problems.

Dr. Barker has given us a blueprint; let us now work toward the solid construction of realistic and equitable solutions to the liability insurance crisis with which we—and our patients—are faced.

Let's all show Dr. Barker how much we really appreciate him.

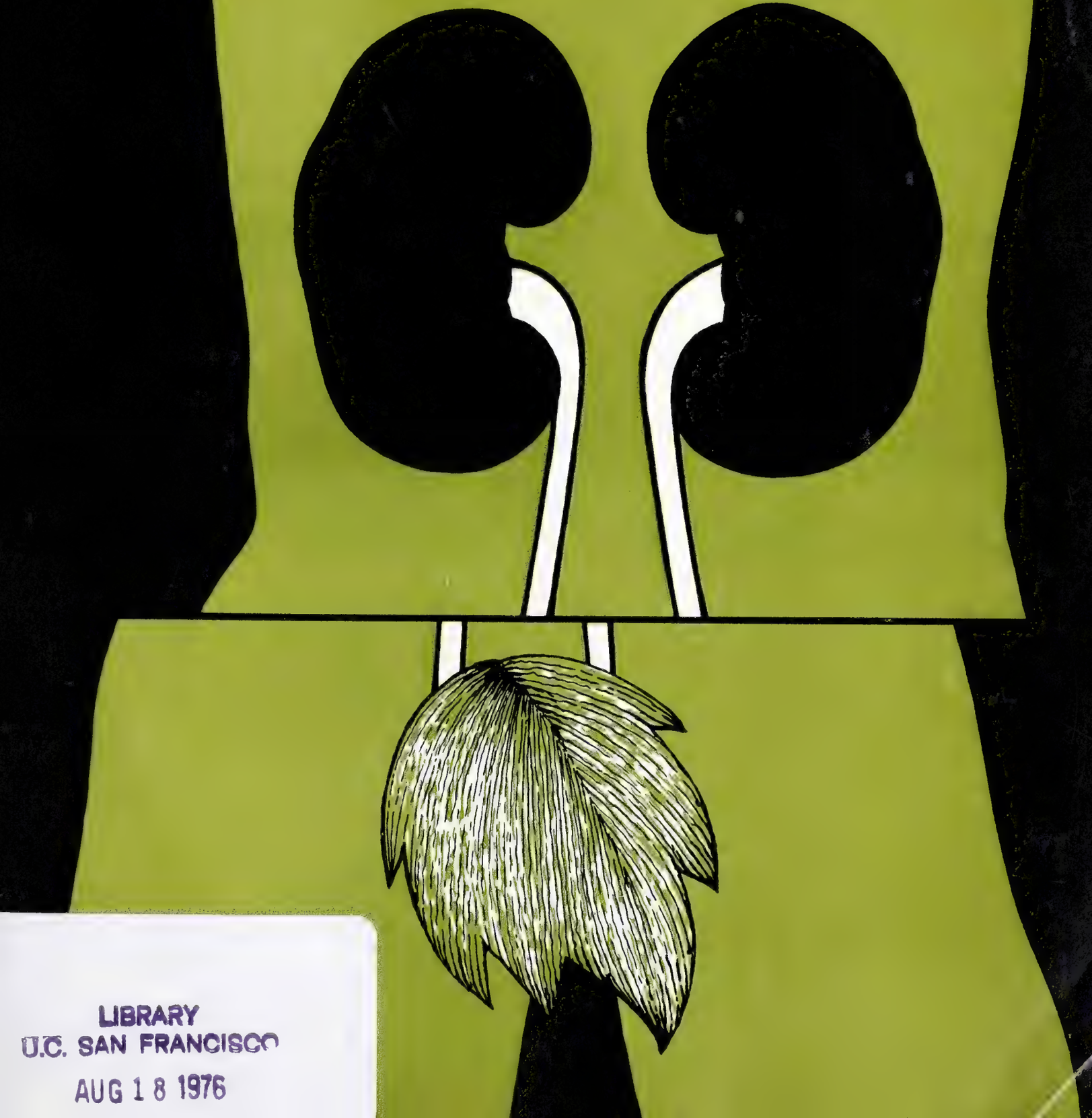
L. S. Thompson Jr. M. D.

L. S. Thompson, Jr., MD, President, Texas Medical Association.

Aug76

TexasMedicine

Genitourinary trauma
Is it true what they say about skin grafts?
Report on the AMA meeting
Medical consultation:
where good medicine, good manners meet



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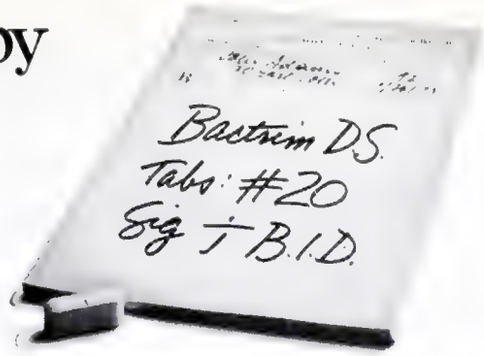

In a multicenter, double-blind study of patients with chronic or frequently recurrent urinary tract infection, Bactrim 10-day therapy outperformed ampicillin 10-day therapy by 27.2%, when comparing patients who maintained clear cultures for eight weeks. Criterion for "clear culture" was 1000 or fewer organisms/ml of urine.

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Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

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For chronic or frequently recurrent cystitis and pyelonephritis due to susceptible organisms.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections. The recommended quantitative disc susceptibility method (*Federal Register, 37*:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **Data are insufficient to recommend use in infants and children under 12.**

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) every 24 hours
Below 15	Use not recommended

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole — bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.

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In a multicenter study of patients with chronic or frequently recurrent urinary tract infections

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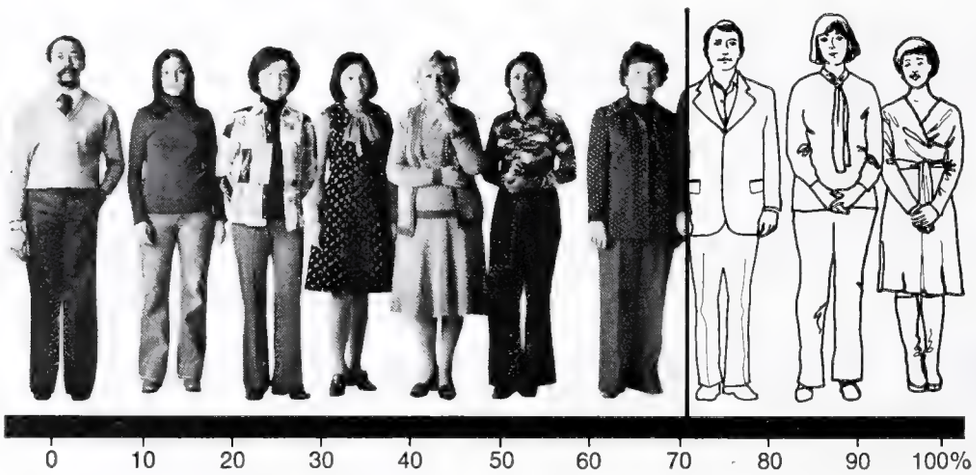
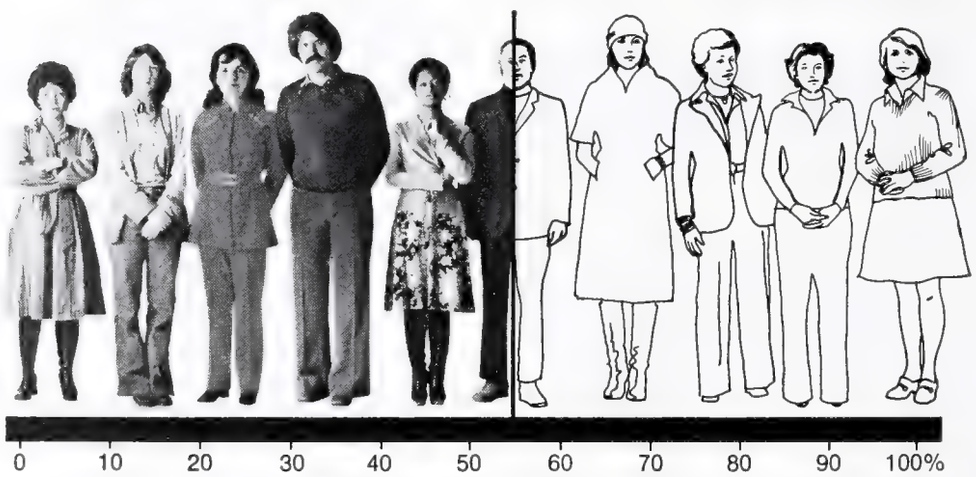


Bactrim–70.5% of 78 patients infection-free at 8 weeks.



ampicillin–55.4% of 74 patients infection-free at 8 weeks.

*This percentage is arrived at by the statistical method of dividing the difference between Bactrim and ampicillin results (15.1%) by the percent of ampicillin results (55.4%).

†Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

Double Strength tablets Just 1 tablet B.I.D.

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Please see summary of product information on preceding page. ROCHE

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VOL 72 AUGUST 1976
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Likely mechanisms of injury, diagnostic studies and findings, and treatment of injuries to various parts of the genitourinary system are presented in the comprehensive outline beginning on page 35.

NEXT MONTH

Articles next month will be on practical use of psychiatric drugs in children, updating psychotropic drug therapy, use and abuse of adrenocortical steroid hormones in clinical practice, spontaneous rupture of the small bowel, suppressor T cells and autoimmune disease, and the relationship of latency in herpes virus hominis to oncogenesis and recurrent disease.

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*First Health and Nutrition Examination Survey, DHEW Pub. No. (HRA) 74-1219-1, National Center for Health Statistics, Rockville, Maryland. (This report indicates that approximately 95% of the children 1-5 years old had iron intakes *below* the standard set by the Food and Nutrition Board of the National Academy of Sciences.)

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Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

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NEWS

AMA House of Delegates faced complex issues in Dallas

"Cut-and-dried" is a term that cannot be applied to the complex issues which faced the American Medical Association's House of Delegates during its semi-annual session this summer in Dallas. The house met concurrently with the association's 125th annual convention June 26-July 1.

The 256-member house dealt with virtually all major issues affecting medicine today, including national health insurance, appropriate determination of death, medical discipline, due process for physicians accused of unethical conduct, cost containment in health care, medical education, and a variety of other topics. The complexities of issues surrounding physicians were clearly evident from the burgeoning three-and-one-half-inch notebooks delegates carried and from the lengthy debates in reference committees and on the floor of the house.

Five Texas resolutions were considered by the AMA house and two Texas physicians were elected to important posts in the AMA. In addition, during the meeting a Texas doctor was recognized as the 55,000th recipient of the AMA's Physician's Recognition Award, signifying his completion of 150 hours of continuing education.

Elected to AMA council positions were Dr. Stanley J. Dudrick of Houston, who became a member of the newly-created Council on Scientific Affairs and Dr. M. T. "Pepper" Jenkins of Dallas, who joined the Council on Medical Education. Dr. Dudrick is professor and chairman of the Department of Surgery, The University of Texas Health Science Center at Houston. He is chief of surgical services at Hermann Hospital, Houston, and the 1975 recipient of the AMA's Brookdale Award in Medicine for distinguished accomplishment in medical science. Dr. Dudrick was elected to a two-year term on the new council, which will have 11 members. Dr. Jenkins was elected to a three-year term on the Council on Medical Education. He is McDermott Professor and chairman of the Department of Anesthesiology, The University of Texas Southwestern Medical School at Dallas, and is chief of anesthesiology in affiliated institutions, comprising Parkland Memorial Hospital, Children's Medical Center, Scottish Rite Hospital, and Veterans Administration Hospital. He is an AMA delegate from the Section Council on Anesthesiology and a representative from the Council of Medical Specialty

Societies to the Coordinating Council on Medical Education. Both physicians have received many additional honors in the service of medicine.

Dr. Bonnie B. Westbrook., Jr., of Beaumont, a member of the Texas Medical Association's Council on Medical Education and Hospitals, was recognized as the 55,000th recipient of the AMA's Physician's Recognition Award during the AMA meeting. Dr. James W. Haviland, outgoing chairman of the AMA Council on Medical Education, presented a certificate documenting Dr. Westbrook's fulfillment of 150 hours of continuing education. Dr. Westbrook also is a past president of the Texas Academy of Family Physicians.

Dr. Bonnie B. Westbrook

Texas resolutions

Five resolutions forwarded to the AMA by the TMA's House of Delegates received attention. The concepts expressed in four resolutions received favorable reaction from the AMA house, although one was taken under advisement by the AMA prior to any definite approval. The intent of only one resolution was not received favorably by the AMA delegates.

Model membership bylaws

A Texas resolution seeking amendment of the AMA's Model Membership Bylaws by deleting a provision for full membership of medical students was not approved. The AMA House of Delegates, in making the decision, observed that the Model Membership Bylaws were merely presented for consideration by state associations and were not mandatory provisions. The complete Model Membership Bylaws were adopted by the AMA House of Delegates in June, 1975, and recommended for adoption by state medical associations and component societies.

Drug package inserts

A Texas resolution calling for opposition to S 2697, the Federal Drug and Devices Act, was adopted and referred to the AMA Board of Trustees for appropriate action. The AMA previously had taken a

NEWS

position to oppose the bill, which seeks to fine a physician for prescribing a drug for a use other than one indicated on the package insert. The Texas resolution and similar resolutions offered by California and Louisiana state societies also asserted that the drug package insert should not be made a legal document for punishment of physicians.
The AMA Executive Vice President Dr. James H. Sammons has already advised the Senate Subcommittee on Health (Committee on Labor and Public Welfare) of the AMA's opposition to the bill and another statement voicing strong opposition will be forwarded shortly to the subcommittee.

Universal identifier system

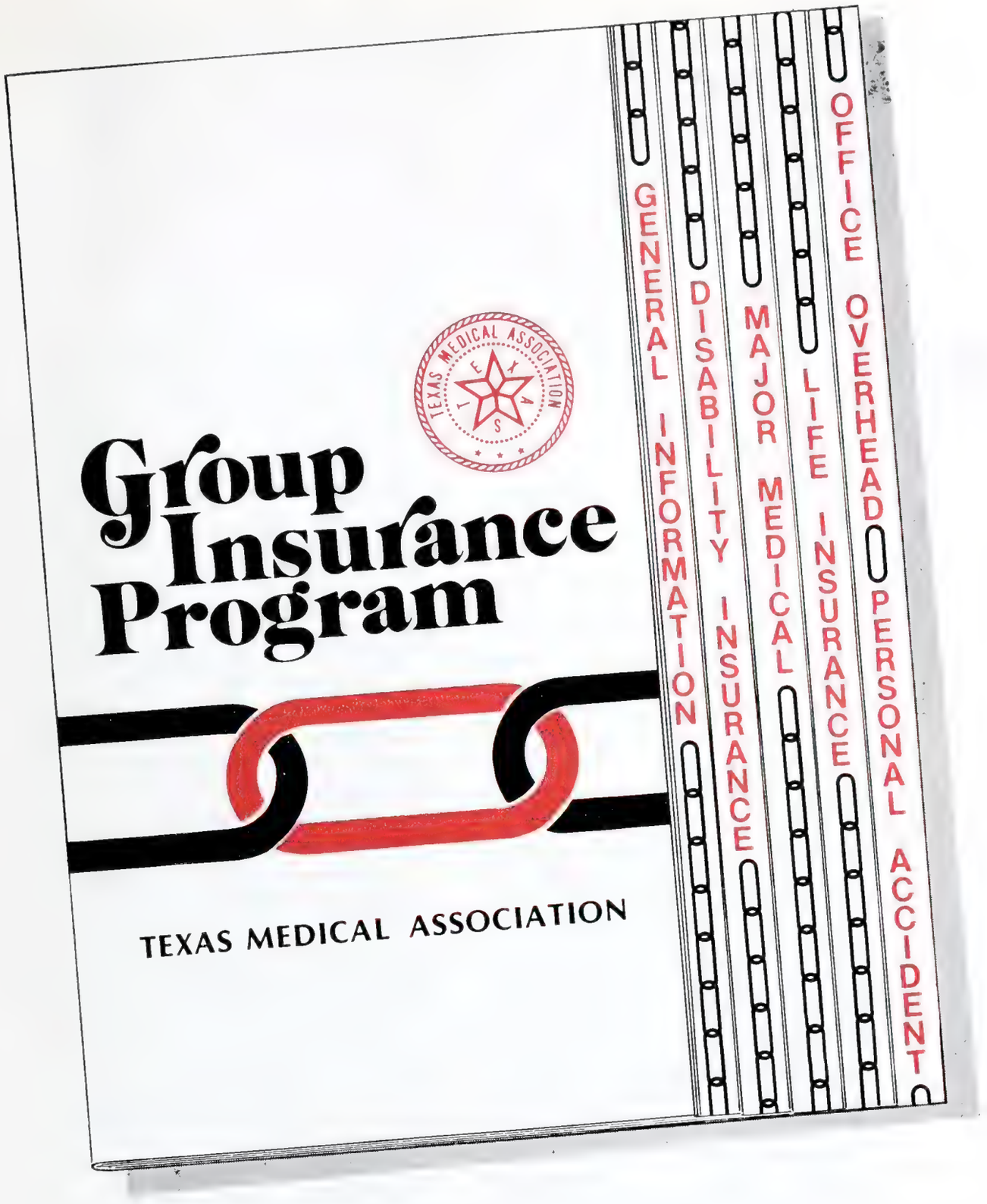
Four resolutions were presented to the AMA opposing the use of Social Security numbers as a universal identifier system. Although the concept expressed in the Texas resolution was approved, the actual wording of a resolution from Tennessee was adopted by the delegates. The Tennessee resolution noted that federal regulations specify that the Social Security number may only be required by the Social Security Administration and the Internal Revenue Service and that all other uses are voluntary. Nevertheless, the resolution noted, the Department of Health, Education, and Welfare has indicated that it is mandating the use of the number as an identifier on all hospital records in order to enable the Bureau of Quality Assurance to tie medical records to an individual physician. The resolution strongly opposes the use of the Social Security number as a universal number identifier and calls for copies of the resolution to be sent to all state medical associations, professional standards review organizations, and DHEW.
Simultaneously with these resolutions, the AMA house reviewed a progress report from the Board of Trustees on its efforts on behalf of confidentiality to seek deletion of the request for patient and physician names and their respective Social Security numbers from the Uniform Hospital Discarge Abstracts submitted by Medicare intermediaries. The AMA was commended for its efforts in this regard.

Commendation and support of organization opposing PL 93-641

This resolution called for commendation and support of a Texas group, the Organization for Preservation of Local Medical Services, Inc, in its opposition to PL 93-641, the National Health Planning and Resources Development Act of 1974. The AMA reference committee which evaluated the Texas resolution expressed support of the organization's activities and was impressed with its efforts. The committee further expressed interest in obtaining more information regarding the organization and therefore referred the resolution to the Board of Trustees for appropriate action. The Texas resolution had urged that the AMA support the activities of the organization and also urge its members to associate with the organization to effect repeal or amendment of PL 93-641.
Various aspects of the law were reviewed in depth by the AMA which presently is pursuing a legal challenge to the law.

Medicare and Medicaid Administrative Reform Act

Texas and three other states submitted resolutions opposing aspects of the Medicare and Medicaid Administrative Reform Act (S 3205). The Texas resolution sought to delete or amend sections of the act which are harmful to physicians and physician-patient relationships, including proposed limits on physicians' fees; a provision which discourages direct billing under Medicare, and provisions which intervene in the physician-patient relationships of hospital associated physicians. After review



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of all resolutions, the house adopted a substitute resolution offered by the reference committee which stated that S 3205 should not be adopted by Congress in its present form; that the AMA should seek to remove or amend sections of the bill which are not in the interest of the public and the profession; and that it should seek to support provisions which it finds constructive and beneficial.

The resolution further asked the Board of Trustees to take appropriate safeguards to protect the interest of the public and the profession from unwarranted and unjustified intrusions in providing high quality health care in government programs. The resolution was referred to the Board of Trustees for action.

The Texas Medical Association is represented in the American Medical Association House of Delegates by a team comprising ten delegates and ten alternate delegates. Chairman of the delegation is Dr. Charles Max Cole of Dallas; vice chairman is Dr. Nym L. Barker of Paris. In addition, members of the house from Texas are Dr. M. T. Jenkins, representing the Section Council on Anesthesiology, Dr. Henry A. Holle representing the Section Council on Preventive Medicine, and Dr. Coleman Jacobson, representing the Section Council on Dermatology. Dr. Joe T. Nelson, AMA trustee, and Dr. Milford Rouse, AMA past president, are ex officio house members. The Texas delegation meets regularly throughout the year and during AMA meetings on behalf of the interests of Texas physicians and their patients.

A highlight of the AMA Dallas meeting which comprised more than 50 postgraduate courses, scientific exhibits and meetings, and the comprehensive business sessions of the House of Delegates, was a barbecue and ranch party sponsored for out-of-state guests by the Southwestern States (Arizona, Arkansas, Louisiana, New Mexico, Oklahoma, and Texas). Site of the party was Bunker Hunt's Circle T Ranch, 25 miles from Dallas. Many of the arrangements were made by the Woman's Auxiliary to the Texas Medical Association. Special features included the Country Sounds' band and a quarter horse riding demonstration including barrel racing. One of the highlights of the evening was the exhibition of a Charolais bull weighing nearly 3,000 pounds.

Additional actions of the AMA house will be carried in forthcoming issues of *Texas Medicine* as well as *American Medical News*.

Facts published on medical costs

Some facts about the cost of medical care were presented by Dr. Max H. Parrott, immediate past president, American Medical Association, in the "Policy Forum" column of the June 26 issue of the *National Journal*. Dr. Parrott pointed out that during the past five years, the component for medical care in the Consumer Price Index rose 39.8%, with physician fees increasing 39.5%. The "all items" category rose 38.6%, and the "all services" category, 37%. According to Dr. Parrott, the CPI is as good an indicator as is available, but ignores significant increases in the quality of care such as new technology and more sophisticated treatments for disease.

From 1970 to 1975, the total expenditures in the United States for health grew from $69.2 billion to $118.5 billion, a jump of 71.2%. Dr. Parrott noted several "dynamic forces" which fuel the inflation of health care costs including health insurance, government programs, demographic changes, hospital costs, and malpractice.

Insurance pays nine out of ten hospital bills, and 65% of physician care expenses. Twenty-five years ago, the patient paid about two-thirds of his medical expenses. He now pays less than one-third in out-of-pocket costs. Dr. Parrott stated that

by emphasizing hospital benefits rather than less expensive ambulatory care, health insurance exerts another upward pressure on cost.
One example cited in regard to government programs is the fact that Medicaid benefits have tripled since the start of the program and now amount to $32.5 million annually.
The United States is becoming an older nation as well as more populous. The oldest 10% of the population accounts for more than 33% of inpatient hospital days.
Hospital costs exert tremendous impact, Dr. Parrott stated. He noted that hospital payroll costs, one large factor in the hospital budget, went from $33.16 per patient day in 1970 to $72.34 in 1975.
In addition, professional liability insurance premiums which physicians and hospitals pay are beginning to drive up medical costs appreciably.
Dr. Parrott emphasized that medical care costs have to be considered along with the accessibility of medical care to the whole population and the quality of medical care which is rendered. He stated that it is his feeling that the answer is in health education—better knowledge and especially better motivation—applied to personal health decisions on diet, nutrition, tobacco, alcohol, exercise, and emotional stress.

Flu immunization plans progressing in state

According to officials at the Texas Department of Health Resources, two types of influenza vaccine will be made available to all licensed physicians in Texas.
A monovalent vaccine (A/New Jersey) is scheduled to be ready for distribution in late August or early September. The bivalent vaccine (A/New Jersey & A/Victoria) was to be ready for distribution in late July.
The vaccines will be supplied free-of-charge to physicians with the stipulation that no charge be made to patients for the cost of the vaccine and that weekly reports of vaccine usage (by age group and type of vaccine) be made to the health department unit supplying the vaccine. These reports are to be made on postage-paid cards that will be provided with the vaccine. Charges may be made for the cost of administration.
Supplies such as needles and syringes, cotton balls, jet injectors, etc, will be made available when large aggregates of the population will be served such as in hospitals, nursing and convalescent homes, industrial plants, large business organizations, and schools.
At the national level, the American Medical Association has reiterated the willingness of the medical profession to provide its expertise and skills in seeking success in the national swine influenza immunization program. In a statement submitted to the House Subcommittee on Public Health and Environment, the AMA pointed out that the full effects of inoculations are not known and that such effects could create potential liability for physicians who participate in the program. Also noting that reasonable availability and expense of proper insurance coverage of physicians and other health personnel are in serious question, the AMA urged that the expense of such increased risk involved "should not fall upon the professionals who cooperate in the government program, nor upon their patients who would ultimately have to pay such costs."
The Subcommittee has been considering several bills relating to the mass immunization program including a proposal to protect physicians, health care personnel, and health care facilities from claims arising from the swine flu vaccine program, except in cases of gross negligence. Another bill would indemnify drug manufacturers.
The Congress was recessed from July 2 to July 19 for Independence Day and the Democratic Convention.

NEWS

TMA fall conference slated

Thomas F. Johnson, PhD, director of research for the American Enterprise Institute for Public Policy Research, Washington, D C, will deliver the keynote talk at the Texas Medical Association's fall conference.

The conference, "An Update on Medical Issues," is scheduled for Sept 18 at the Joe C. Thompson Conference Center in Austin.

A variety of prominent guest speakers and panel sessions will focus on current topics of concern to physicians such as Medicare and Medicaid legislation, health manpower, implementation of professional standards review organizations, utilization review, health planning, swine influenza immunization, professional liability, and others.

In addition to the conference program, there will be an orientation program for provisional TMA members. Many TMA boards, councils, and committees will be meeting in Austin that weekend also.

Entertainment highlights will include a hospitality hour co-sponsored by the Prudential Insurance Company of America and the Texas Medical Association's Insurance Trust, and a football game between the University of Texas and North Texas State University.

Texas medical schools confer 710 MD degrees

A total of 710 doctor of medicine degrees were conferred by the state's six medical schools at the end of the spring term. This is an increase of 78 over the number of MD degrees awarded in the spring of 1974.

The number of graduates from each school was as follows: Baylor College of Medicine, 176; Texas Tech University School of Medicine, 42; University of Texas Medical School at San Antonio, 121; University of Texas Medical Branch at Galveston, 186; University of Texas Southwestern Medical School at Dallas, 138; and University of Texas Medical School at Houston, 47.

The Dallas graduates comprised the largest class ever to graduate from the Southwestern Medical School. The school is moving toward annual graduating classes of 200 by 1978.

Seventy-six of the 121 San Antonio graduates will affiliate with hospitals in Texas for residency training. Fifty-eight of the 121 graduates plan residencies in the primary care fields. Additionally, nine will take a flexible residency which covers the major specialties.

Of Baylor's graduates, 95 will take their graduate training in Texas and 60% have chosen to take their first year of training in primary care areas.

Student winners announced in writing competition

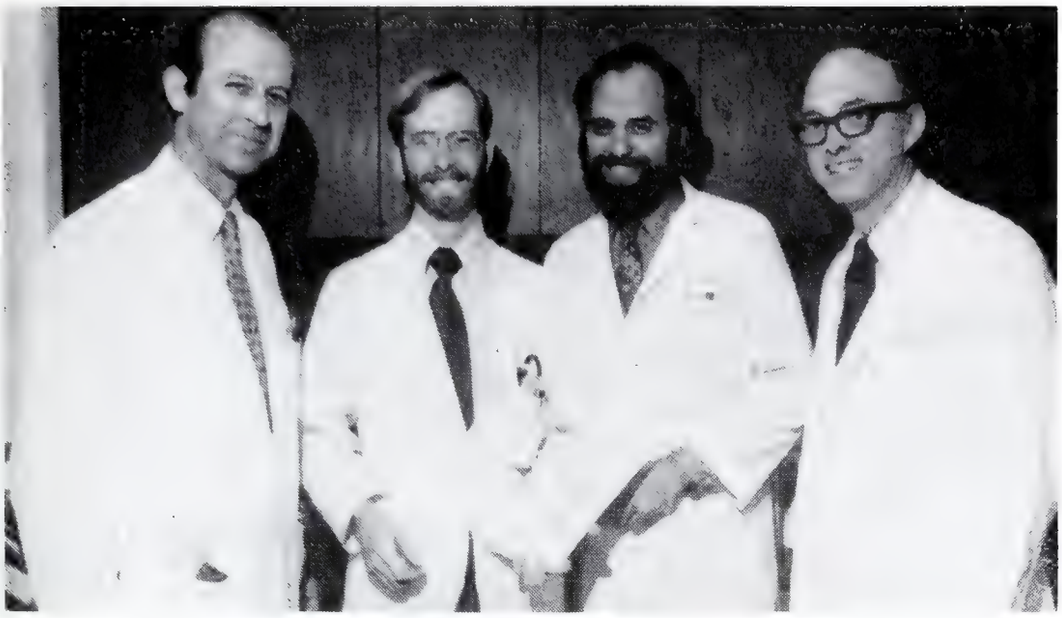
The Texas Medical Association has announced the winners of its 11th annual Texas Medicine Award competition for excellence in scientific writing by a Texas medical student.

Selected as recipient of the top award is Frank M. Orson, a junior medical student at Baylor College of Medicine in Houston. The second place winner is William S. Epstein, a first year medical student at The University of Texas Medical Branch at Galveston.

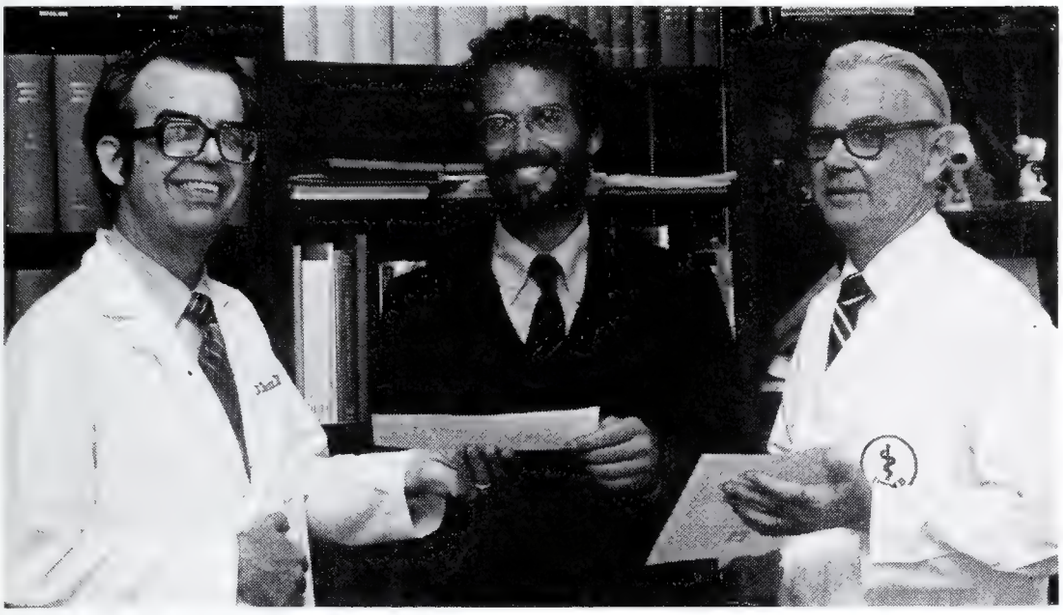
Each winner was presented a certificate and a cash prize in ceremonies at his respective school. First place earns $300 with second place receiving $100. The winning articles will be published in *Texas Medicine* next fall.

Orson's winning paper, "Suppressor T Cells and Autoimmune Disease," was written during an elective research course in the laboratory of Dr. Robert R. Rich, associate professor of microbiology, immunology, and medicine at Baylor. The second place article is "Latency in Herpes Virus Hominis: Its Relationship to Oncogenesis and Recurrent Disease."

A native of Seminole, Orson was



Participating in the Texas Medicine Award presentation ceremony at Baylor College of Medicine were (l-r) Dr. H .Irving Schweppe, Jr., clinical professor of medicine and member of TMA's Scientific Publication Committee; Frank Orson, third year medical student and first place winner in the TMA student writing competition; Dr. Robert R. Rich, associate professor of microbiology, immunology and medicine; and Dr. William T. Butler, acting executive vice president.



William S. Epstein (center), a first year medical student at The University of Texas Medical Branch at Galveston received the second place Texas Medicine Award certificate and check from Dr. Edward N. Brandt (left), dean, and Dr. C. W. Daeschner, representing TMA's Scientific Publication Committee.

graduated from Rice University in 1973 with a bachelor's degree in chemistry and biochemistry. A member of Baylor's May 1977 graduating class, Orson plans an internship and residency in internal medicine with further training in immunology research. In the fall he will attend a clinical clerkship in immunology at the National Institutes of Health. He is the son of Dr. and Mrs. O. W. Orson of Midland.

Epstein, originally from Galveston, holds a BA degree in biology from The University of Texas at Austin and an MS degree in cellular and molecular biology from the University of Michigan. He is a member of the UTMB class of 1979. Among his activities, he serves as a volunteer at the Shriners Burns Institute. He is the son of Dr. and Mrs. I. V. Epstein of Pasadena.

The TMA award was established in 1966 to recognize the best scientific article written by a medical student while enrolled in a Texas medical school. Articles must deal with a sub-

ject within the realm of the basic sciences or medicine and must be original and unpublished. Excellence of scientific work and competence in the writing craft are the judging criteria.

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TMA retains Austin law firm

The Austin law firm of Brown, Maroney, Rose, Baker, and Barber assumed the role of General Counsel for the Texas Medical Association June 1. Attorneys Jack Maroney, Will Barber, and Ace Pickens will serve as primary contacts within the full-service firm for TMA.
Philip R. Overton, legal counsel for TMA for 37 years, will serve as a consultant to the firm.

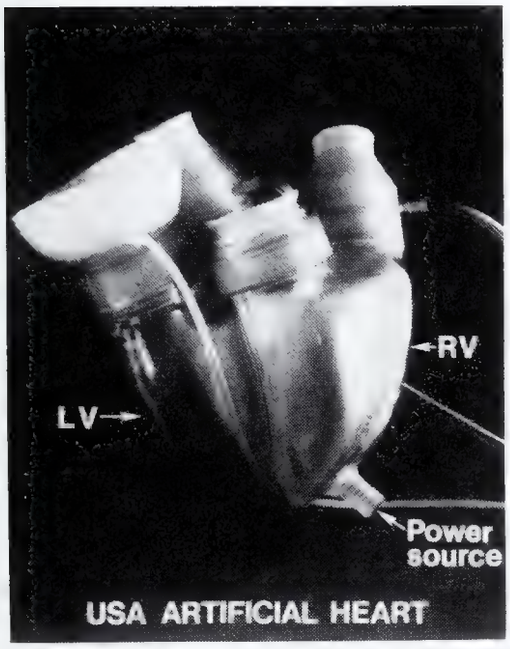
TMA supports doctors unable to obtain insurance

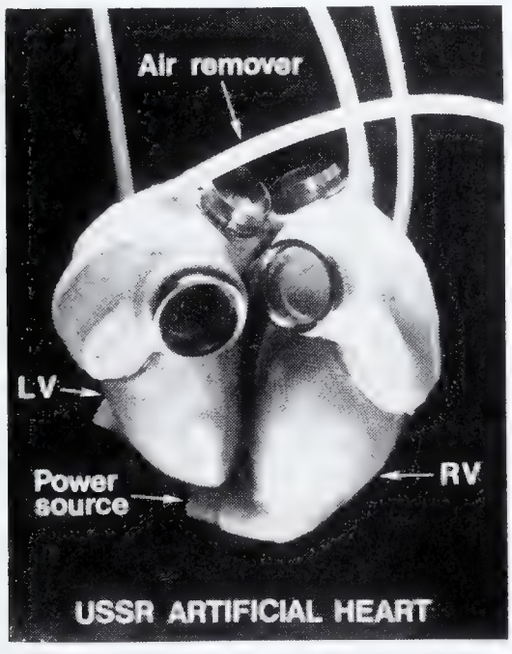
"Lack of malpractice insurance gives Texas physicians the impossible choice between discontinuing their practices or exposing themselves to financial ruin," Dr. L. S. Thompson, Jr., Texas Medical Association president, said in a recent statement.
"TMA has always urged doctors to continue working as long as they can. However, when doctors daily face the possibility of financial ruin and staggering malpractice insurance premiums, sometimes they have to cut back their practices."
Dr. Thompson's statement came as a comment upon the recent situation in Houston when Baylor College of Medicine interns, residents, and other physicians in training almost lost their professional liability insurance coverage and could not get an adequate replacement policy. They did not want to continue working without insurance and risk financial ruin from a suit that could hit whether it was deserved or not. The interns and residents obtained coverage only from the state-operated Joint Underwriting Association (JUA) a few hours before the scheduled midnight cessation of services.
The TMA president's statement reaffirms the action taken by the TMA House of Delegates in June, 1975 in which sympathy and support was expressed to those physicians who are unable to continue to practice medicine because they cannot obtain insurance or cannot afford to pay exorbitant premiums.

Soviet, US scientists perform implantation of artificial hearts

Soviet and American scientists have taken the joint US-USSR artificial heart program one step further with each team's successful implantation of its design of the artificial heart into calves. Both lab animals survived the trauma of a total heart replacement and lived to recover from the anesthesia.
These implant procedures highlighted a week-long visit in late June to Baylor College of Medicine by the Soviet working team. During the week Soviet heart researchers toured the Baylor labs and attended scientific sessions which focused on some of the problems involved in the development of an artificial heart.
The visit marked the end of Phase I of the US-USSR artificial heart program, which began in 1974. Since that time, information, devices, and procedures have been exchanged between Soviet and American scientists.
Dr. Michael E. DeBakey, president of Baylor College of Medicine, is the coordinator of the Artificial Heart and Circulatory Assist Task Force, and spearheads the U S effort. Dr. Valeriy I. Shumakov, director of the Institute of Transplantation of Organs and Tissues, is the USSR coordinator.
The National Heart, Lung and Blood Institute, National Institutes of Health, supports the US involvement

in this program.
The current working session of Phase I began last March when the American team visited Moscow. In Moscow, both teams implanted artificial hearts in lab animals simply to demonstrate surgical implant techniques.
The US artificial heart has a polycarbonate housing, tilting disc valves and an inner lining of polyurethane. Stroke volume of the American heart is about 100 ml. Shape of the artificial heart mimics the shape of the natural heart.
Each side of the American device contains a diaphragm which acts like the muscular contraction and relaxation of the natural heart, and is controlled by an external "phematic drive unit." This drive unit pulses the heart by providing alternative applications of positive and negative air pressure through drive lines leading from the heart to this unit.
Positive air pressure pushes blood out of the pump into the pulmonary or systemic circulatory systems. Negative pulse acts like a vacuum, drawing the blood into the chamber.
The shape of the Soviet heart also mimics the structure of the human heart. Like the American heart, the design is powered by an external drive unit. Unlike the American design, the Soviet device is made of silicone rubber and has four instead of two chambers. The walls of the Soviet heart act like a bladder, which contains the blood and acts as the pumping mechanism filling and expelling blood.
In addition to the silicone artificial heart device, the Soviets brought to Houston a circular artificial heart with a built-in capacitance sensor designed for automatic control of the heart.
Both American and Soviet scientists agree on the major problems in artificial heart devices. Some of the problems facing researchers include materials, power sources, design, durability, fit, output, control and clotting.





Physician poll requested on PSRO area designation

In a letter to David Mathews, secretary of the Department of Health, Education, and Welfare, Dr. Joseph T. Painter, president of the Texas Institute for Medical Assessment requested that a voluntary nonstatutory poll of Texas physicians be conducted to validate their preference for the designation of a professional standards review area.
Dr. Painter said in the letter that the physicians of Texas, acting through their professional organizations at re-

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cent state meetings, reaffirmed their support of professional standards review under a single statewide area designation and for TIMA to serve as the PSRO in the state.

In addition, Dr. Painter said medical and osteopathic schools, hospitals, nursing homes, and other providers favor this position. State agencies and the intermediary for Titles XVIII and XIX are also supportive.

Temple hospital participating in national gallstone study

A study which seeks to remove the need for hospitalization in treatment of cholesterol gallstone disease has been undertaken in part by Scott and White Memorial Hospital in Temple, one of ten treatment centers in the National Cooperative Gallstone Study (NCGS).

The NCGS was established under the auspices of the National Institute of Arthritis, Metabolism and Digestive Diseases. Its objectives are threefold: (1) to establish the efficacy and safety of two dosage levels of chenodeoxycholic acid as a means for gallstone dissolution; (2) to establish the natural history of gallstone disease; and (3) to gain further understanding of bile acid metabolism in man, especially as it relates to cholesterol metabolism and potential toxicity of chenodeoxycholic acid.

Each of the ten treatment centers across the country are in the process of recruiting 90 patients to participate in the two-year study. The patients will be divided into three groups for the study: a control group that will receive placebo medication; a group receiving a low dose of chenodeoxycholic acid known to produce favorable changes in bile; and a group receiving a higher dose known to be capable of producing gallstone dissolution.

The following criteria have been set for admission of patients to the study: (1) the presence of gallstone in functioning gallbladder as demonstrated by oral cholecystogram; (2) the patient is either a female, postmenopausal or post hysterectomy, between the ages of 21 and 70 years; or a male 21 to 70 years of age; (3) the patient is not excessively obese (body weight does not exceed 200% of ideal weight); and (4) the patient is able to attend regular follow-up visits at the treatment center and is willing to follow the center doctor's instructions. An evaluation visit to the treatment center will be required of each potential study participant prior to admission.

Dr. N. C. Hightower, treatment center director at Scott and White, emphasized the importance of the referring physician's role in the study. A basic premise of the study is that each patient retains the prerogative of choosing his or her personal physician for general medical care during the treatment period. The referring physician will be requested to report any intercurrent illness to the project physician and to consult with the project physician concerning the management of any problem possibly related to drug toxicity or side effects, or to cholelithiasis or other hepatobiliary tract disease. The project physician will be available through a 24-hour call system.

A "Physician's Handbook" detailing the study is available to interested doctors from Dr. Hightower at Scott and White Memorial Hospital, Temple 76501.

MEDIX announces second season

MEDIX, a weekly 30-minute television series on medicine and health, has announced its second season of syndication. The program is aired on seven Texas stations.

The series is designed to provide the public with useful health care information. It is produced in a documentary format and most programs have been filmed on location. Host of the series is Mario Machado, a television

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In 3 double-blind, randomized, placebo-controlled studies[1-3] of patients with acute, painful musculoskeletal disorders affecting the back, Soma helped effect...

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In acute, painful low-back disorders

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(carisoprodol) 350 mg tablets

for measurable relief

Indications: Carisoprodol is indicated as an adjunct to rest, physical therapy, and other measures for the relief of discomfort associated with acute, painful musculoskeletal conditions.

Contraindications: Acute intermittent porphyria and allergic or idiosyncratic reactions to carisoprodol or related compounds such as meprobamate, mebutamate, tybamate

Warnings: *Idiosyncratic Reactions:* Rarely, extreme weakness, transient quadriplegia, dizziness, ataxia, temporary vision loss, diplopia, mydriasis, dysarthria, agitation, euphoria, confusion and disorientation have appeared within minutes or hours of the first dose. These usually subside in several hours but supportive and symptomatic therapy, including hospitalization, may be necessary.
Pregnancy and Lactation: Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers (concentrations in breast milk are two to four times that in plasma), or women of childbearing potential.
Children Under Twelve: Not recommended.
Potentially Hazardous Tasks: Driving a motor vehicle or operating machinery.
Additive Effects: Effects of carisoprodol and alcohol, other CNS depressants or psychotropic drugs may be additive.
Drug Dependence Use cautiously in addiction-prone patients.

Precautions: To avoid excess accumulation, use caution in patients with compromised liver or kidney function.

Adverse Reactions: *Central Nervous System:* Drowsiness, dizziness, vertigo, ataxia, tremor, agitation, irritability, headache, depressive reactions, syncope, insomnia, idiosyncratic reaction (see "Warnings").
Allergic or Idiosyncratic: In previously unexposed patients, these are usually seen after 1-4 doses and include rash, erythema multiforme, pruritus, eosinophilia, fixed drug eruption with cross reaction to meprobamate. Asthmatic episodes, fever, weakness, dizziness, angioneurotic edema, smarting eyes, hypotension and anaphylactoid shock may be manifestations of severe reactions. In such cases, stop carisoprodol and initiate appropriate treatment (e.g., epinephrine, antihistamines, corticosteroids).
Cardiovascular: Tachycardia, postural hypotension, facial flushing.
Gastrointestinal: Nausea, vomiting, hiccup, epigastric distress.
Hematologic: Leukopenia and pancytopenia (on carisoprodol plus other drugs).

Usual Adult Dosage: One 350 mg tablet three times daily and at bedtime.

Overdosage: Has produced stupor, coma, shock, respiratory depression, and, very rarely, death. The effects of an overdosage of carisoprodol and alcohol or other CNS depressants or psychotropic agents can be additive even when one of the drugs has been taken in the usual recommended dosage. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Carisoprodol is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully with related drug meprobamate. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

Before prescribing, consult package circular or latest PDR information.

1. Hindle, T.H. III: Calif. Med. *117*:7 (Aug.) 1972. 2,3. Unpublished Data on file, Medical Department, Wallace Laboratories, Cranbury, N.J.

news reporter.
MEDIX premiered nationally in January 1975 after three years on the air in Los Angeles. The series, produced in cooperation with the Los Angeles County Medical Association, is sponsored by Burroughs Wellcome Company.
The series is currently being shown in the following Texas cities: Dallas/Fort Worth (WFAA, 1:30 pm Saturday), Houston (KDOG, 5 pm Saturday), San Antonio (KSAT, 5 pm Sunday), Temple (KCEN, 5 pm Sunday), Amarillo (KFDA, 1:30 pm Saturday), Beaumont/Port Arthur (KBMT, 8 am Sunday), and Odessa (KOSA, 8 am Sunday).

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Management seminars set

Two accounts management-awareness seminars for the medical, dental, and hospital professions have been scheduled for the fall by the Division of Extension of the University of Texas at Austin.
The one-day seminars are slated for Sept 17 in Houston and Oct 7 in Austin. The course for the health care areas was designed and is conducted by William J. and Lucille Strickler, training specialists for the Industrial and Business Training Bureau of the extension division.
Further information may be obtained by calling Paul K. Andrews in Houston (713) 652-3434 and Don Hewett in Austin (512) 454-5876.

Hospital review plan approved

The Texas State Department of Public Welfare has approved the Texas Medical Foundation's plan to assist nonmetropolitan hospitals in Medicaid utilization review.
More than 100 of these hospitals, located outside large metropolitan areas and usually having fewer than five Medicaid admissions a week, had requested utilization review assistance from the foundation.
The approved plan is "S-TARP" or "Special TARP", a modification of the Texas Admissions Review Program (TARP) being introduced into metropolitan hospitals. It calls for use of hospital employees as medical care analysts or TMF-hired part-time medical care analysts who will be trained in short training sessions.
A pilot training session was recently conducted in El Paso. According to the Texas Medical Foundation, for every metropolitan hospital, there are approximately four hospitals at such a distance from a metropolitan area and with sufficiently few Medicaid admissions as to utilize S-TARP.

Manpower report released

The Macy Commission has released a report urging the establishment of an "analytical and coordinating agency to carry out relevant studies on medical manpower and to make recommendations to the appropriate bodies, including the federal government."
The commission stated that the report, "Physicians for the Future," arose from the medical community's concern that the demands for more primary care physicians might lead to expansion at cost of quality. The 14-member commission was appointed by the Josiah Macy, Jr. Foundation, New York, and is chaired by Dale R. Corson, PhD, president, Cornell University.
The proposed agency would be called the National Commission on Medical Education, Manpower, and Services. The Macy Commission suggests that it coordinate the nation's health programs, which now are "so fragmented that (they) are not being carried out with maximum effectiveness."
The commission noted that because it is approximately eight years between conception and the first graduating class of a new medical school, such schools should not be considered a panacea for the current physician shortage. When four years of graduate

training are added, it takes 12 years to produce a practicing physician, says the commission.

The commission considers medical education to be a national resource which should be subsidized by the federal government. However, this support should be free of "disruptive mandatory requirements." The commission supports federal loans which have mandatory service requirements, but these funds "should be awarded through a direct contractual relationship . . . ." At present, the report states, the federal government is the largest single source of support for the country's medical schools.

According to the report, the number of graduate education opportunities for family practitioners and other primary care physicians should be increased. Statistics compiled by the American Medical Association, and used as background material by the commission, show that 281 general practitioners and 1,464 family practice first-year residency positions were available for 1975-76.

The commission feels that women physicians are an underutilized resource. Although their numbers are increasing (women accounted for 11.1% of US medical schools graduates in 1973-74), the report says, "Members of medical school faculties have discouraged women from entering certain specialties, and some have been openly hostile to women medical students as a group . . . Their promotion has been slower than that of male colleagues, their salaries have been lower, and they have often been assigned to faculty positions with no status or tenure."

The commission also suggests that medical schools should increase minority representation on faculties. It noted that curricula in the secondary schools and colleges which graduate minorities are inadequate. Background material for the commission's study indicates that in 1974-75, black Americans, American Indians, Mexican-Americans and Mainland Puerto Ricans made up 10% of first-year student enrollments.

The commission's study found that foreign medical graduates (FMGs) will not solve the geographic maldistribution of physicians, since few practice in underserved areas. In addition, the report states that FMGs create a "double standard" of medicine since the examinations they are required to take are "less exacting" than those required of graduates of US schools.

The report points out the importance of allied health personnel during the current physician shortage. Data from 1973 shows that AMA-accredited programs graduated 26,108 allied health personnel. The report goes on to say that the roles of the nurse practitioner and the physician's assistant must be clearly defined.

The commission also stated that "Consideration should be given to periodic recertification of physicians, or, as an alternative, evidence of participation in continuing education or equivalent updating of skills."

The report further states, "Two specialty societies—the American Academy of Family Physicians and the American College of Radiology—require documentation of continuing education if membership is to be retained. Two states, New Mexico and Maryland, now require recertification, and others may soon follow suit."

Baylor awarded grant for health education project

Medical and allied health students at Baylor College of Medicine will soon be learning some much needed patient education skills as a result of a two-year grant from the National Fund for Medical Education.

The $56,800 project, under the direction of Dr. Carlos Vallbona, chairman of Baylor's department of community medicine, is designed to develop and evaluate a model health education curriculum to train undergraduate physicians and physician's assistants

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in the techniques of patient education.

The multidisciplinary program will include a review of motivational psychology, an orientation to the use of audiovisual materials, exposure to one-to-one and group techniques of interpersonal communication, and instruction in the design, implementation, and management of specific patient education protocols with the participation of other health professionals, health educators, and consumers.

Dr. Vallbona said if the project is successful, it will provide long-term benefits to health and health care by improving the patient's understanding of his physical, mental, and social environment.

Motorcycle safety emphasized by governor

Calling special attention to motorcycle traffic accidents during the recent "Motorcycle Safety Awareness Week," Gov Dolph Briscoe said it is "high time we learn that the motorcycle and the automobile can be compatible in traffic on our streets and highways."

The governor said, "Motorcycles have rapidly become a way of life in Texas as thousands of people use them for basic transportation and pleasure. Unfortunately, as the number of registered motorcycles increases, so do the number of traffic accidents."

Statistics show that approximately 270,000 motorcycles are registered in Texas and during 1975 over 200 motorcycle related fatalities were reported. An estimated 8,562 persons were injured.

"I strongly urge motorists and motorcyclists to make an increased effort to become familiar with the rules-of-the-road and to exercise caution in traveling in congested traffic. Automobiles and motorcycles can coexist, but in order to reduce traffic accidents, a concentrated effort must be made by all vehicle drivers. Additionally, I recommend driver education for motorcycle drivers. I trust we can expand current programs on a voluntary basis as appropriate and within present budget considerations," Governor Briscoe said.

Auxiliary elects officers

New officers have been elected by the Woman's Auxiliary to the Texas Medical Association.

Mrs. Horace H. Trippet of Waco will serve as president for 1976-1977 with Mrs. John C. Koch of Lufkin as president-elect.

Other officers include: Mrs. Mylie E. Durham, Jr., Houston, first vice president; Mrs. Glenn H. Ricks, Brady, western regional vice president; Mrs. Oliver H. Timmins, Jr., San Antonio, southern regional vice president; Mrs. Richard D. Atkins, Baytown, eastern regional vice president; Mrs. Michael Kurilecz, Dallas, northern regional vice president; Mrs. W. Arnold Pitchford, El Paso, recording secretary; Mrs. Tom M. Oliver, Waco, corresponding secretary; Mrs. Frank B. Gooch, Fort Worth, treasurer; Mrs. Joe A. Lewis, Corpus Christi, publicity secretary, and Mrs. Russell Deter, El Paso, parliamentarian.

"Why don't you take off a week to decide which refresher course is best?"

Open Your Mind And Say Ahhh!

Advances in Clinical Medicine A Workshop

A good mind will appreciate another. And primary care physicians will find this **workshop** particularly exciting and relevant to their practice. The faculty of the University of Texas Southwestern Medical School has organized a series of lectures and patient demonstrations to illustrate the most significant recent advances in clinical medicine. Emphasis will be placed upon common problems and their practical solutions. Participants will be provided a course syllabus and the opportunity to take part in teaching rounds and outpatient clinics. As a Continuing Medical Education offering, this symposium meets the criteria for twenty-four hours in Category One for the Physician's Recognition Award of the A.M.A. and twenty-four **Prescribed Hours** by the American Academy of Family Physicians.

Dates for the **workshop** are Monday, **September 27** through Thursday, **September 30**. Cost of registration is $250.00 ($100.00 for Residents and Fellows). Participants and spouses will also be invited to attend social and sports events.

For further information contact the office of Continuing Education, University of Texas Southwestern Medical School, 5323 Harry Hines Blvd., Dallas, Texas 75235, 214/688-2166 or 2167.

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Physicians favor continuing education as requirement

More than two-thirds of physicians surveyed by the American Medical Association say they favor a continuing medical education requirement as a prerequisite to registering their licenses.

The poll was reported in a recent issue of *American Medical News.*

"The endorsement by a large proportion of American physicians of the continuing education concept as a criterion for licensing privileges has particular significance in light of the attention focused today upon the issue of physician competence," the AMA said.

Physician opinion on who should assure compliance with the continuing education requirement was divided. State medical associations were preferred by almost 30%. Others suggested medical specialty organizations, state medical examining boards, and the American Medical Association.

Almost three-fourths of the doctors surveyed said they agreed with the suggested national baseline of 150 hours of continuing education every three years, as used by the AMA Physicians Recognition Award.

Annual Session tapes available through library

Audio cassettes of several programs from the 1976 Texas Medical Association Annual Session are available for loan to members through the association's film library.

The taped sessions include the aging symposium and the sections on surgery, pediatrics, psychiatry, and ophthalmology.

The programs were tape-recorded by the Audio-Digest Foundation. Individual copies of the tapes may be purchased from the foundation, 1930 Wilshire Blvd, Los Angeles 90057. Price varies according to the session desired.

TB exam required for school personnel

All Texas public school personnel must have an annual examination for tuberculosis during the 120 days prior to Sept 1, according to the Texas Medical Association's Committee on Tuberculosis and Chronic Respiratory Diseases.

This state law applies to teachers, clerical employees, supervisory personnel, bus drivers, personnel handling food and personnel performing janitorial services. A certificate of proof of examination signed by a medical doctor must be furnished to the governing board of the school.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 6/30/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+15.2%	−33.0%	− 6.2%	1.4%
Loomis-Sayles Mutual Fund	+10.0%	−21.0%	− 3.7%	3.1%
Mercantile Bank Equity Fund	+14.5%	−35.8%	−16.5%	3.5%
Mercantile Bank Fixed Income Fund	+ 3.0%	−13.5%	− 8.6%	7.9%
T Rowe Price Growth Stock Fund	+10.6%	−34.1%	− 1.9%	2.0%
T Rowe Price New Income Fund	+ 1.2%	N/A	N/A	7.9%
Stein Roe & Farnham Balanced Fund	+10.0%	−24.9%	+ 4.1%	3.0%
Standard & Poor 500 Stock Average	+15.6%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+17.6%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

WASHINGTON: PSRO APPEAL WITHDRAWN. On July 6, the Department of Health, Education and Welfare withdrew its appeal to the US District Court decision that declared nine PSRO (professional standards review organization) areas for Texas as unlawful and invalid. The court decision in favor of TMA had enjoined DHEW from implementation of PSRO until full reconsideration of designated areas had been completed.

WASHINGTON: SENATE MANPOWER BILL PASSES. Just prior to the July Congressional recess, the Senate passed S 3239, the Health Professions Educational Assistance Act, by an 88-0 vote. The most significant amendment debated before passage of the bill was the Beall-Taft-Bentsen amendment deleting Title V of S 3239 (concerning federal control of medical residencies) in favor of a three-year study of the subject. Both the Texas and American Medical Associations strongly favored the amendment. An anticipated struggle between Sen J. Glenn Beall (R-Md) and the sponsor of S 3239, Sen Edward Kennedy (D-Mass), over the question of federal control of medical residencies did not materialize, and the Beall amendment was passed 77-2. Sen Jacob Javits (R-NY), prior to passage of the amendment, reportedly added provisions to the Beall amendment which altered existing language in Title VIII of the bill conditioning medical school capitation grant assistance upon requirements that a percentage of students agree to accept National Health Service Corps scholarships and that schools have a required percentage of filled residencies in primary care specialties, unless "assured national goals" are met. The new language added by Javits retains the two conditions, but strikes the references to assured national goals, and required the conditions beginning in October, 1977.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: MALPRACTICE STUDY COMMISSION. The Texas Medical Professional Liability Study Commission, meeting in Austin June 18, tentatively adopted a recommendation to remove the so-called collateral source rule by legislation. This action is in line with the TMA proposal to stop double payment of patients in malpractice actions. The commission also voted to recommend tentatively a limitation on non-economic recovery such as pain and suffering. The commission has July and August meetings scheduled and has adopted a tentative plan for a report to be adopted in September. The commission has also tentatively adopted the following items: (1) termination of the use of a dollar amount in malpractice suits; (2) prohibition of oral warranty of care suits; (3) exclusion of punitive damages from malpractice insurance coverage; (4) elimination of cause of action based on lack of informed consent in certain circumstances; (5) permissive voluntary binding arbitration; and (6) mandatory screening panels composed of all health care providers of the class being sued (with the decision of the panel introduced at any subsequent trial).

WASHINGTON: TALMADGE ON MEDICARE COSTS. In a recent speech on the

Senate floor, Sen Herman E. Talmadge (D-Ga) expressed "shock" that the 1976 annual report on Medicare Part A fund forecasted 300% increase in the actuarial deficit in hospital funds over the next 25 years. Characterizing the cost of Medicare and Medicaid as rising in runaway proportions, the senator expressed the hope that the Senate Finance Committee would be able to act promptly on his bill, S 3205, which he characterized as being designed to bring about necessary reforms in the Medicare and Medicaid administration and reimbursement.

AUSTIN: APPOINTMENT. Gov Dolph Briscoe has appointed Dr. Bill L. Halbert of Teague to replace Dr. Robert W. Shirley of Hillsboro as a member of the Board of Vocational Nurse Examiners of Texas. The term will expire Sept 6, 1979.

WASHINGTON: DRUG ADVERTISING. State laws banning prescription drug advertising by drug stores have been struck down by the Supreme Court. In its opinion, the Court stressed, "We express no opinion as to other professions. Physicians and lawyers, for example, do not dispense standardized products; they render professional services of an almost infinite variety and nature, with a consequent enhanced possibility for confusion and deception if they were to undertake certain kinds of advertising." In a separate opinion concurring with the majority, Chief Justice Warren Burger said, "Roughly 95% of all prescriptions are filled with dosage units already prepared by the manufacturer" and the pharmacist "in this regard no more renders a true professional service than does a clerk who sells law books." The advertisement of "professional services carries with it quite different risks than the advertisement of standard products," he said, adding "I doubt that we know enough about evaluating the quality of medical and legal services to know which claims of superiority are "misleading and which are justifiable. Nor am I sure that even advertising the price of certain professional services is not inherently misleading, since what the professional must do will vary greatly in individual cases. It is important to note that the Court wisely leaves these issues to another date."

WASHINGTON: FTC COMPLAINT AGAINST AMA. The American Medical Association has stated that the Federal Trade Commission complaint against the AMA violates due process provisions of the Administrative Procedure Act and is so "nebulous" that a defense cannot be prepared. The FTC's antitrust complaint against the AMA and others is scheduled to be heard Oct 18 before an FTC administrative law judge.

WASHINGTON: TRIAL LAWYERS COMPLAIN TO FTC. The American Trial Lawyers Association has filed a petition with the Federal Trade Commission asking that agency to bar the Medical Society of the State of New York from what it calls "false advertising" relating to pending medical malpractice legislation. The trial lawyers' action is the latest in a series of battles between groups representing physicians and lawyers over legislation before the state's legislature that would alter the conduct of medical malpractice cases. The medical society has supported legislation that would alter the conduct of medical malpractice cases. The medical society has supported legislation that would place a ceiling on the amount of money lawyers can receive in contingency fees. It also would place a ceiling on the amount of money the plaintiff can receive in damages.

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CONTINUING EDUCATION COURSES

AUGUST

Cardiovascular Disease

Title: Tutorials in the Tetons: Cardiac Emergencies (Second Annual)
Sponsors: American College of Cardiology; University of Nebraska Cardiovascular Center, Omaha; Northern Rocky Mountain Continuing Education Division of the Mountain States
Location of Course: Explorers' Room, Jackson Lake Lodge, Grand Teton National Park, Moran, Wyo
Dates: Aug 28-30, 1976
Fee: Members, $150; Nonmembers, $175
Credit: 11½ hours, Category I, AMA Physician's Recognition Award; State Board of Education, Maryland
Contact: Miss Mary Anne McInerny, Director, Department of Continuing Education Programs, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014

Ophthalmology

Title: Symposium on External Eye Disease
Sponsors: UT Medical School at Houston, Program in Ophthalmology
Location of Course: Hermann Hospital Auditorium, 1203 Ross Sterling, Houston
Date: Aug 21, 1976
Duration: 1 day, 8 hours instruction
Fee: $50
Designed For: Specialists in Ophthalmology
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Richard S Ruiz, Director, Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77025

Radiology and Radioisotopes

Cancelled: High Energy Electron, X-Ray and Neutron Dosimetry; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston; Aug 2-7, 1976

Urology

Title: Urology Oncology Seminar
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston
Location of Course: Room 1113A, Prudential Building, Texas Medical Center, Houston
Dates: Aug 5-6, 1976
Contact: UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

Other: Mammography

Title: Mammography Training for the Early Diagnosis of Breast Cancer
Sponsors: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston; National Cancer Institute; American College of Radiology
Location of Course: Mammography Conference Room, Department of Diagnostic Radiology, MD Anderson Hospital and Tumor Institute, Texas Medical Center, Houston
Dates: Aug 16-20, 1976
Duration: 5 days, 8 hours instruction per day, 40 total course hours
Fee: None
Designed For: Specialists in Radiology; Residents in Radiology; Radiologic technologists
Enrollment: Maximum, 4 physicians and 4 technologists
Credit: Category I, AMA Physician's Recognition Award; American College of Radiology
Teaching Methods: Audiovisual materials, lecture, live clinic demonstration, round table discussion
Contact: Dawn Nevling Shull, Project Coordinator, Department of Diagnostic Radiology, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, 6723 Bertner Dr, Houston 77030

SEPTEMBER

Basic Sciences: Microbiology & Immunology

Title: Anaerobic Microbiology Workshop
Sponsors: A Webb Roberts Center for Continuing Education in the Health Sciences, Dallas; Virginia Polytechnic Institute and State University, Division of Anaerobic Microbiology
Location of Course: Beasley Auditorium, Baylor University Medical Center; UT Health Science Center at Dallas
Dates: Sep 17-19, 1976
Fee: Lectures only, $20; Lectures and lab session, $50
Credit: 14 hours, Category I, AMA Physician's Recognition Award
Contact: A Webb Roberts Center for Continuing Education, Baylor University Medical Center, 3500 Gaston Ave, Dallas 75246

Family Medicine

Title: Family Practice Recertification Review
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Sep 10-12, 1976
Duration: Continuous, 3 days, 6 hours instruction per day, 18 total course hours
Fee: To be determined
Designed For: General practitioners
Enrollment: Minimum, 25; Maximum, 100

Credit: 18 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, open question
Contact: Office of Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Office Gynecology
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Sep 18-19, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 10 total course hours
Fee: $75
Designed For: General practitioners; Specialists in Gynecology
Enrollment: Maximum, 110
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, open question
Contact: Office of Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Seventh Family Medicine Review
Location of Course: University of Kentucky Medical Center, Lexington, Ky
Dates: Sep 26-Oct 2, 1976; Repeated Oct 17-23, 1976
Fee: $295
Contact: Dr. Frank R Lemon, Continuing Education, College of Medicine, University of Kentucky, Lexington, Ky 40506

Title: Advances in Clinical Medicine
Sponsor: Faculty, UT Southwestern Medical School, Dallas
Location of Course: Gooch Auditorium, UT Health Science Center at Dallas
Dates: Sep 27-30, 1976
Fee: $250; $100 for Residents, Fellows with letter from Head of Department
Credit: 24 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, patient demonstration, syllabus provided, participation in teaching rounds and outpatient clinics
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

General Medicine

Title: Blackford Memorial Lectures
Sponsor: Memorial Hospital of Denison
Date: Sep 11, 1976
Duration: 1 day
Fee: None
Designed For: General practioners; Specialists
Enrollment: Maximum, 100
Credit: AAFP
Teaching Methods: Audiovisual materials, clinical conference, lecture, live clinic, open question, panel, patient demonstration, seminar, television
Contact: Mike Mayes, Executive Director, Memorial Hospital of Denison, 1000 Memorial Dr, Denison 75020

Obstetrics & Gynecology

Title: Great Debates in Gynecological Endocrinology and Infertility
Sponsor: Baylor College of Medicine, Houston
Location of Course: Texas Medical Center, Houston
Dates: Sep 16-18, 1976
Duration: Continuous, 3 days
Fee: To be determined
Designed For: Specialists
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Psychiatry

Title: Colloquium in Psychoanalytic Psychotherapy
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Sep 18-19, 1976
Duration: Continuous, 2 days, 5 hours instruction per day
Fee: $75
Designed For: Specialists in Psychiatry
Credit: 10 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Office of Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Other: Psychology

Title: MMPI Workshop
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Date: Sep 25, 1976
Duration: Continuous, 1 day, 7 total course hours
Fee: $65
Designed For: General practitioners; Psychologists; School counselors
Enrollment: Maximum, 60
Credit: 18 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, open question
Contact: Office of Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

COMING MEETINGS

AMERICAN COLLEGE OF CARDIOLOGY

The American College of Cardiology, in conjunction with the University of Nebraska Cardiovascular Center and the Northern Rocky Mountain Continuing Education Division of the Mountain States, has announced that Tutorials in the Tetons: Cardiac Emergencies will take place Aug 28-30, 1976, in the Grand Teton National Park, Moran, Wyo. The program will present new methods of diagnosis and management, including new drugs and new equipment. The faculty includes Drs. Robert J Davis II, Cheyenne, Wyo; Barry S Dzindzio, Omaha; Robert S Eliot, Omaha; Alan D Forker, Omaha; Leonard S Gettes, Lexington, Ky; Henry J L Marriott, Gainesville, Fla; Dean T Mason, Davis, Calif; John H Phillips, New Orleans; Charles E Rackley, Birmingham, Ala; Shahbudin H Rahimtoola, Portland, Ore; and Gerald L Wolf, Omaha. The program has been accredited by the State Board of Education in Maryland. It also meets the criteria for 11½ hours of credit, Category I, toward the AMA Physician's Recognition Award. A registration fee of $150 is charged for members of the ACC. Nonmembers will pay a fee of $175.

Contact: Mary Anne McInerny, Dir, Dept of Continuing Education Programs, 9650 Rockville Pike, Bethesda, Md 20014.

DEPARTMENT OF OPHTHALMOLOGY, UT HEALTH SCIENCE CENTER AT HOUSTON

The Department of Ophthalmology, The University of Texas Health Science Center at Houston, Division of Continuing Education, and the Medical School will sponsor a symposium on external eye disease Saturday, Aug 21, 1976, in Hermann Hospital Auditorium, beginning at 8:30 a.m. Dr. Phillips Thygeson, professor emeritus of ophthalmology, the University of California, San Francisco; Dr. Dan B Jones, associate professor of ophthalmology, Baylor College of Medicine, Houston; and Dr. Jeffrey D Lanier, clinical instructor in ophthalmology, UT Health Science Center at Houston, are the scheduled speakers.

Contact: Department of Ophthalmology, UT Health Science Center at Houston, The Medical School, 1121 Hermann Professional Bldg, Houston 77030.

CURRENT NATIONAL MEETINGS

ASPEN MUSHROOM CONFERENCE, third annual meeting, Hotel Jerome, Aspen, Colo, Aug 8-13, 1976. Designed for physicians, amateur mycologists, scientists interested in identification, toxic properties of mushrooms. Sponsored by Colorado Mountain College, Glenwood Springs; Beth Israel Hospital and Geriatric Center, Denver. Alexander H Smith, senior faculty member, is author of Field Guide to Western Mushrooms, professor of botany at University of Michigan. Courses on advances in diagnosis and treatment of mushroom poisoning, hallucinogenic mushrooms. Fees: general, $165; resident, $75; spouse, $50. Contact: Aspen Mushroom Conference, 1818 Gaylord St, Denver 80206.

INTERNATIONAL DOCTORS IN ALCOHOLICS ANONYMOUS, annual convention, Los Angeles Marriott Hotel, Aug 5-8, 1976. Registration begins Thursday afternoon, Aug 5. Scientific sessions Friday, Aug 6, include: seizure problems in early recovery, alcoholism from the viewpoint of a medical educator, identification of the alcoholic employe in the health professions. Registration fee. Reservations can be made by calling toll free 800-228-9290. Contact: Dr. Lewis K Reed, Sec-Treas, 1950 Volney Rd, Youngstown, Ohio 44511.

TRANSPLANTATION SOCIETY, Sixth International Congress, Waldorf-Astoria Hotel, New York, Aug 22-28, 1976. Main congress topics: clinical transplantation (kidney, heart, lung, liver, bone marrow, other); experimental organ transplantation; HL-A system (immunogenetics, clinical usefulness in transplantation and disease); hemodialysis and other artificial life support systems; chemical and biological immunosuppressive agents; specific allogeneic unresponsiveness (tolerance, enhancement, immunoparalysis); maternal-fetal relationships; immunobiology of transplantation; mammalian histocompatibility systems; xenotransplantation. Contact: Felix T Rapaport, Congress Secretariat, New York University Medical Center, 560 First Ave (Room H-438), New York 10016.

For other courses and symposiums, see Continuing Education Courses, pp 28-29.

AUGUST

■ AMERICAN ASSOCIATION OF CLINICAL CHEMISTS, Houston, Aug 1-6, 1976. 1725 K St, NW, Washington, DC 20006.

AMERICAN ASSOCIATION OF FOUNDATIONS FOR MEDICAL CARE, Boston, Aug 7-12, 1976. Box 230, Stockton, Calif 95201.

■ AMERICAN PODIATRY ASSOCIATION, Dallas, Aug 12-17, 1976. 20 Chevy Chase Circle, NW, Washington, DC 20015.

■ AMERICAN SOCIETY OF PARASITOLOGISTS, San Antonio, Aug 22-27, 1976. UT Health Science Center at Dallas, Dallas 75235.

ASPEN MUSHROOM CONFERENCE, Aspen, Colo, Aug 8-13, 1976. 1818 Gaylord St, Denver 80206.

INTERNATIONAL DOCTORS IN ALCOHOLICS ANONYMOUS, Los Angeles, Aug 5-8, 1976. Sec, IDAA, 1950 Volney, Youngstown, Ohio 44511.

MEDICAL WOMEN'S INTERNATIONAL ASSOCIATION, Tokyo, Aug 22-28, 1976. c/o Japan Medical Women's Association, 19 Kawadacho, Ichigayan, Shinjuku-ku Tokyo.

TRANSPLANTATION SOCIETY, New York, Aug 22-28, 1976. Felix T Rapaport, New York University Medical Center, 560 First Ave (Room H-438), New York 10016.

SEPTEMBER

AMERICAN ACADEMY FOR CEREBRAL PALSY, Los Angeles, Sep 12-16, 1976. 1255 New Hampshire Ave NW, Room 1030, Washington, DC 20036.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Boston, Sep 20-23, 1976. 1740 W 92nd St, Kansas City, Mo 64114.

■ AMERICAN ACADEMY OF MEDICAL ADMINISTRATORS, Dallas, Sep 19-20, 1976. 6 Beacon St, Boston 02108.

AMERICAN CANCER SOCIETY-NATIONAL CANCER INSTITUTE, St. Louis, Sep 20-22, 1976. Dr. Sidney L Arje, American Cancer Society, 777 Third Ave, New York 10017.

AMERICAN COUNCIL OF MEDICAL STAFFS, New Orleans, Sep 24, 1976. 3422 Bienville St, New Orleans 70119.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Dearborn, Mich, Sep 30-Oct 2, 1976. 4137 Erie St, Willoughby, Ohio 44094.

AMERICAN FRACTURE ASSOCIATION, Acapulco, Mexico, Sep 5-10, 1976. Box 10202, Atlanta 30319.

■ AMERICAN HOSPITAL ASSOCIATION, Dallas, Sep 20-23, 1976. 840 N Lake Shore Dr, Chicago 60611.

AMERICAN PSYCHIATRIC ASSOCIATION, Atlanta, Sep 19-28, 1976. 1700 18th St, NW, Washington, DC 20009.

AMERICAN ROENTGEN RAY SOCIETY, Washington, DC, Sep 18-25, 1976. 20 N Wacker Dr, Chicago 60606.

AMERICAN SOCIETY OF PLASTIC & RECONSTRUCTIVE SURGEONS, Boston, Sep 26-Oct 1, 1976. 29 E Madison St, Ste 807, Chicago 60602.

NATIONAL ASSOCIATION OF NEIGHBORHOOD HEALTH CENTERS, INC, Atlanta, Sep 20-24, 1976. 1625 I St, NW, Ste 403, Washington, DC 20006.

SOCIETY FOR PEDIATRIC RADIOLOGY, Washington, DC, Sep 19-20, 1976. c/o Johns Hopkins Hospital, Baltimore 21205.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Sep 17-19, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS PEDIATRIC SOCIETY, Dallas, Sep 23-25. 1976. Mary E Greene, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES, Houston, Sep 29-Oct 1, 1976. Drs. Sergio Henao and Mae F McMillan, 1300 Moursund Ave, Houston 77030.

OCTOBER

AMERICAN ACADEMY OF PEDIATRICS, Washington, DC, Oct 16-21, 1976. 5320 Pine Ridge Ave, Cheyenne, Wyo 82001.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct 31-Nov 5, 1976. 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tuscon, Ariz, Oct 3-6, 1976. Box 912, DTS, Omaha 68101.

AMERICAN BOARD OF FAMILY PRACTICE, Certification examination, Seven cities throughout the US, Oct 30-31, 1976. Dr. Nicholas J Pisacano, Exec Dir-Sec, University of Kentucky Medical Center, Lexington, Ky 40506.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Atlanta, Oct 24-28, 1976. 911 Busse Highway, Park Ridge, Ill 60068.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, New Orleans, Oct 12-14, 1976. 241 E Saginaw, E Lansing, Mich 48823.

AMERICAN COLLEGE OF GASTROENTEROLOGY, Montreal, Oct 24-30, 1976. 299 Broadway, New York 10007.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct 11-15, 1976. 55 E Erie St, Chicago 60611.

AMERICAN GROUP PRACTICE ASSOCIATION, Bal Harbour, Fla, Oct 5-9, 1976. 20 S Quaker Lane, Alexandria, Va 22313.

AMERICAN MEDICAL ASSOCIATION AUXILIARY, Chicago, October, 1976. 535 N Dearborn St, Chicago, 60610.

■ AMERICAN MEDICAL TENNIS ASSOCIATION, Austin, Lakeway World of Tennis, Oct 16-23, 1976. Box 13, Alton, Ill 62002.

AMERICAN MEDICAL WRITERS ASSOCIATION, Detroit, Oct 6-10, 1976. 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, New Orleans, Oct 7-10, 1976. Box 708, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, San Francisco, Oct 9-13, 1976. 515 Busse Hwy, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Los Angeles, Oct 15-22, 1976. 2100 W Harrison St, Chicago 60612.

■ AMERICAN SOCIETY FOR MICROBIOLOGY, Austin, Oct 6-8, 1976. 1913 I St, NW, Washington, DC 20006.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Washington, DC, Oct 11-13, 1976. 200 Berkeley St, Boston 02117.

■ ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, San Antonio, Oct 31-Nov 4, 1976. 10605 Concord St, Kensington, Md 20795.

GERONTOLOGICAL SOCIETY, New York, Oct 13-17, 1976. 1 Dupont Circle, Ste 520, Washington, DC 20036.

INTERNATIONAL ACADEMY OF PATHOLOGY, Washington, DC, Oct 17-23, 1976. c/o Dept of Pathology, University of Indiana Medical Center, Indianapolis 46202.

INTERNATIONAL ASSOCIATION OF SOCIAL PSYCHIATRY, Yugoslavia, October, 1976. Dr. John J Carleton, 2323 Oak Lane, Santa Barbara, Calif 93105.

INTERNATIONAL CONGRESS OF ALLERGOLOGY, Buenos Aires, October, 1976. Dr. LL Henderson, Sec Gen, Mayo Clinic, Rochester, Minn 55901.

INTERNATIONAL FEDERATION OF GYNECOLOGY & OBSTETRICS, Mexico City, October, 1976. Av Baja California 317-301, Mexico 11 DF.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 2, 1976. Box 3276, Amarillo 79106.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Dallas, Oct 17-19, 1976. Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

WORLD MEDICAL ASSEMBLY, Sao Paulo, Brazil, Oct 24-30, 1976. DOC/Associacao Medica Brasileira, Au, Paulista 1159/3-314/315, 01311 Sao Paulo, Brazil.

NOVEMBER

AMERICAN ACADEMY OF MAXILLOFACIAL PROSTHETICS, San Diego, Calif, Nov 8-10, 1976. 110 S Jerge Dr, Elma, NY 14059.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Newton, Mass, Nov 8-12, 1976. 430 N Michigan Ave, Chicago 60611.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tucson, Ariz, Nov 28-Dec 2, 1976. Box 912, Omaha 68101.

AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Miami Beach, Fla, Nov 5-10, 1976. Robert R Weilacher, Exec Dir, 7411 Hines Place, Dallas 75235.

AMERICAN BOARD OF PATHOLOGY, Chicago, Nov 18-20, 1976. 1820 Exchange Natl Bank Bldg, 610 N Florida Ave, Tampa, Fla 33602.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN HEART ASSOCIATION, Miami Beach, Fla, Nov 15-19, 1976. 44 E 23rd St, New York 10010.

■ AMERICAN SOCIETY OF CYTOLOGY, Houston, Nov 3-6, 1976. Dr. Warren R Lang, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 1006, Philadelphia 19107.

■ MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Houston, Nov 11-12, 1976. Stephen C Stuyck or Dr. Margaret Davis, MD Anderson Hospital and Tumor Institute, Houston 77030.

MEDICAL SOCIETY OF THE STATE OF NEW YORK, New York, Nov 7-11, 1976. 420 Lakeville Rd, Lake Success, NY 11040.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Guadalajara, Mexico, November, 1976. c/o Virginia Bryant, 333 W Thomas Rd, Phoenix, Ariz 85013.

MEDICAL SOCIETY OF VIRGINIA, Williamsburg, Va, Nov 4-7, 1976. 4205 Dover Rd, Richmond, Va 23221.

NATIONAL ASSOCIATION FOR MENTAL HEALTH, Philadelphia, Nov 16-19, 1976. 1800 N Kent St, Arlington, Va 22209.

NATIONAL EYE RESEARCH FOUNDATION, Las Vegas, Nev, Nov 7-11, 1976. 18 S Michigan Ave, Chicago 60603.

NATIONAL KIDNEY FOUNDATION, Washington, DC, Nov 17-21, 1976. 116 E 27th St, New York 10016.

NEW YORK STATE SOCIETY OF DERMATOLOGY, New York, Nov 8, 1976. 420 Lexington Ave, Ste 443, New York 10017.

NEW YORK STATE SOCIETY OF INTERNAL MEDICINE, New York, Nov 10, 1976. 420 Lexington Ave, Ste 443, New York 10017.

PAN AMERICAN ASSOCIATION OF OTO-RHINO-LARYNGOLOGY AND BRONCHOESOPHAGOLOGY, New Orleans, Nov 7-11, 1976. 10921 Wilshire Blvd, Los Angeles 90024.

PENNSYLVANIA MEDICAL SOCIETY, Hershey, Pa, Nov 3-5, 1976. 20 Erford Rd, Lemoyne, Pa 17043.

PUERTO RICO MEDICAL ASSOCIATION, Santurce, PR, Nov 16-20, 1976. 1305 Fernandez Juncos Ave, Box 9387, Santurce, PR 00908.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov 28-Dec 3, 1976. 1 MONY Plaza, 15th Floor, Syracuse, NY 13202.

SOUTHERN MEDICAL ASSOCIATION, New Orleans, Nov 8-11, 1976. 2601 Highland Ave, Birmingham, Ala 35205.

■ **TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Nov 6-7, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.**

DECEMBER

AMERICAN MEDICAL ASSOCIATION, Philadelphia, Dec 4-8, 1976. 535 N Dearborn St, Chicago 60610.

AMERICAN SOCIETY OF HEMATOLOGY, Boston, Dec 3-5, 1976. Dr. Thomas Bradley, Sec, Veterans Administration Hospital, 4150 Clement St, San Francisco 94121.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nev, Dec 12-16, 1976. 1516 N Lake Shore Dr, Chicago 60610.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 2-4, 1976. Dr. Reuben H Adams, Pres, 3630 Noble Ave, Dallas 75204.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Puerto Vallarta, Mexico, Nov 10-13, 1976. Mrs. Virginia E Bryant, Exec Sec, 333 W Thomas Rd, Suite 207, Phoenix, Ariz 85013.

JANUARY, 1977

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Hollywood, Fla, Jan 30-Feb 5, 1977. Virginia Kendall, Sec, 30 N Michigan Ave, Chicago 60602.

AMERICAN SOCIETY OF CONTEMPORARY OPHTHALMOLOGY, Hollywood Fla, Jan 30-Feb 5, 1977. Dr. John Bellows, Sec, 30 N Michigan Ave, Chicago 60602.

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Genitourinary trauma

C. Eugene Carlton, Jr., MD

Successful repair of injuries to the genitourinary tract is dependent upon early diagnosis since the success rate of primary repair decreases with the passage of time and extent of urinary extravasation and abscess formation.

I. What patients should be suspected of having genitourinary injury?

A. Any patient who received blunt trauma to the perineum, genitalia, abdomen, back, or flank and who evidences hematuria of any degree, decreasing urinary output, unexplained abdominal tenderness, mass, or paralytic ileus, should be suspected of having injury to the genitourinary tract.

B. Any patient with a penetrating wound of the abdomen, flank, genitalia, or pelvis must be considered to have genitourinary tract injury until otherwise indicated, whether or not there is hematuria.

C. Any pedestrian who has been struck by a motor vehicle may have genitourinary injury regardless of physical or laboratory findings because of the extremely high incidence of urinary and renovascular injury in this type of accident.

II. Kidney Injuries:

A. Mechanism of Injury: Most often the kidney is injured by blunt trauma applied over the upper abdomen or posterior chest. Injuries to the renal artery with resultant subintimal dissection and thrombosis most often result from contrecoup damage in auto-pedestrian accidents.

B. Diagnostic Studies:

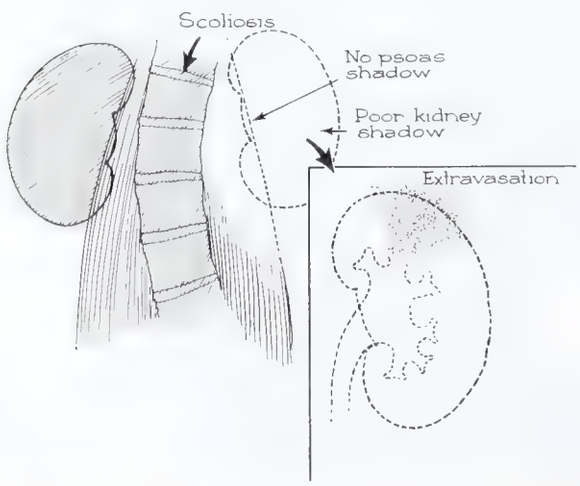
1. Excretory Urogram:
   a. Indications:
      (1) Blunt abdominal trauma with any degree of hematuria
      (2) Auto-pedestrian injury
      (3) Unexplained ileus or abdominal pain
      (4) All penetrating wounds
      (5) Patient with fracture of the lower ribs or the transverse processes of the lumbar vertebrae
      (6) Patient with flank mass or costovertebral angle tenderness
   b. High dose infusion technique: (1 cc contrast medium per pound of body weight) should be used because of decreased excretion during or following shock. When available, tomography should be used routinely with the infusion intravenous pyelogram to demonstrate parenchymal lacerations of the kidney which might not be apparent on the conventional program.
   c. Diagnostic Findings (Fig 1):
      (1) Negative shadow within parenchyma or tomography indicating parenchymal laceration
      (2) Extravasation of contrast media
      (3) Obliteration of psoas shadow
      (4) Lumbar scoliosis away from injured kidney
2. Retrograde pyelograms are useful in delineating injury to the collecting system, but they are less accurate than excretory tomography or renal angiography in demonstrating parenchymal injury. While retrograde pyelograms have been unpopular in the past, they are useful adjuncts and should be made without hesitation when needed.
3. Renal Angiography:
   a. Indications:
      (1) Inadequate parenchymal delineation with nephrotomography
      (2) Suspicion of renal arterial injury (failure of excretion on excre-

tory study) unilateral traumatic thrombosis of the renal artery will be discovered only if angiography is used routinely in instances when the kidney does not excrete contrast media on an excretory study. Early diagnosis is of paramount importance.

b. Technique: The transfemoral route is preferred because superior pictures can be obtained, and the injured patient does not have to be moved and manipulated. A "flush shot" of the aorta to delineate the celiac axis outflow should be obtained, as this may demonstrate injury to the liver or spleen. In addition, all accessory renal vessels can be identified, making any subsequent operation easier. Selective renal arteriograms can then be done if needed.

c. Diagnostic Findings: Positive findings of intimal thrombosis, vascular disruption, and parenchymal laceration are demonstrated in Fig 2.

1. Positive findings on excretory urogram indicative of renal injury: absence of the psoas shadow, absence of diminishment of the renal shadow, lumbar scoliosis away from the site of injury, and extravasation of contrast medium.



C. Treatment of Renal Injury:

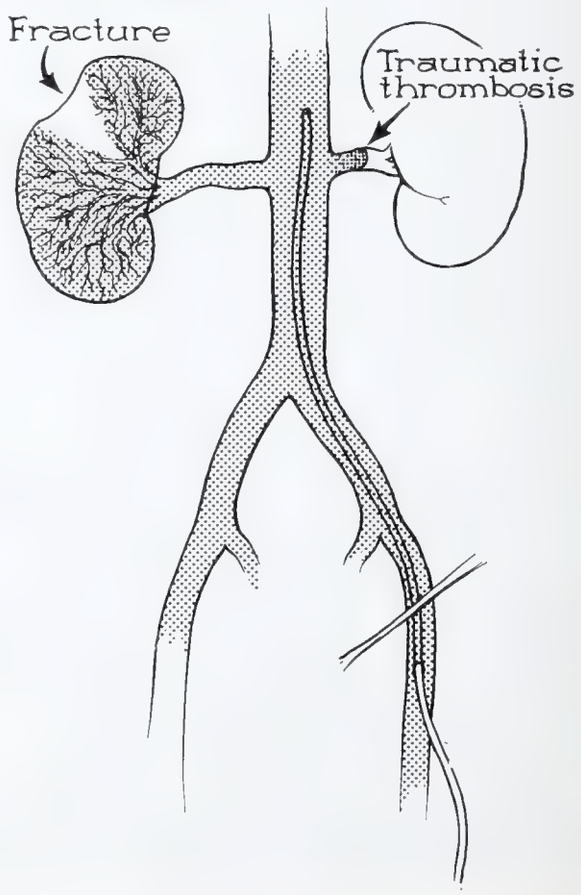
1. Surgical Treatment:

a. Indications:

(1) Penetrating renal injuries: 85% are associated with significant injury to intraperitoneal viscera.

(2) Nonpenetrating renal injuries: In past years there has been a justified hesitancy to perform exploratory surgery in such patients because techniques to control hemorrhage had not been perfected. At present, hemorrhage can be con-

2. Diagrammatic representation of positive angiographic findings in renal trauma. Right: triangular filling defect indicative of renal parenchymal laceration. Left: traumatic thrombosis secondary to intimal laceration of the left renal artery.



trolled and the need to remove a kidney solely for the control of hemorrhage occurs rarely. A number of kidneys will, of course, have to be removed because the extent of renal injury precludes healing and a functioning organ. Exploration of the injured kidney is a safe procedure and should be carried out without hesitation. This is especially true of major intrarenal vessels or when the collecting system is involved. Such injuries usually will be manifested by one or a combination of the following:

(a) A period of hypotension or the need to support blood pressure

(b) Flank mass or tenderness

(c) Evidence of significant hemorrhage or disruption of parenchyma on the angiogram or nephrotomogram

(d) Occlusion of the renal artery on the arteriogram

(e) Significant extravasation on the intravenous pyelogram

(f) Evidence of extrarenal collection of blood or urine on the intravenous pyelogram or kidneys-ureters-bladder film

b. Technique: Figs 3-6

2. Nonoperative Treatment:

a. Indications: Minor cortical lacerations and renal contusions not associated with significant bleeding

b. Regimen:

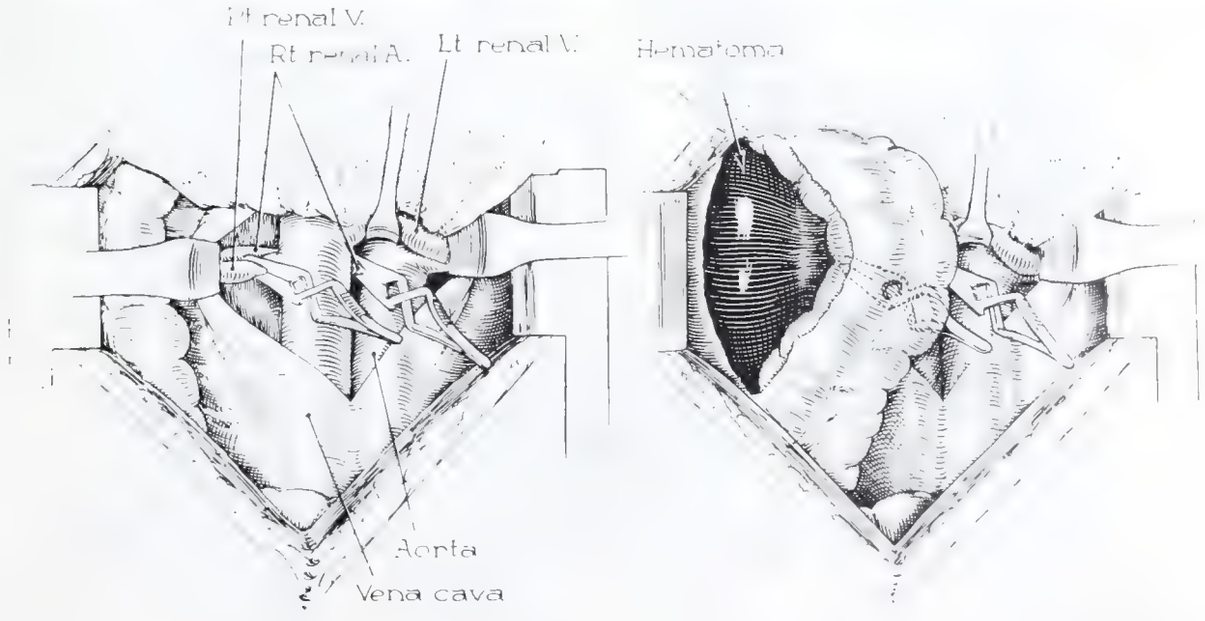
(1) Strict bed rest for a minimum of ten days to decrease the possibility of secondary hemorrhage

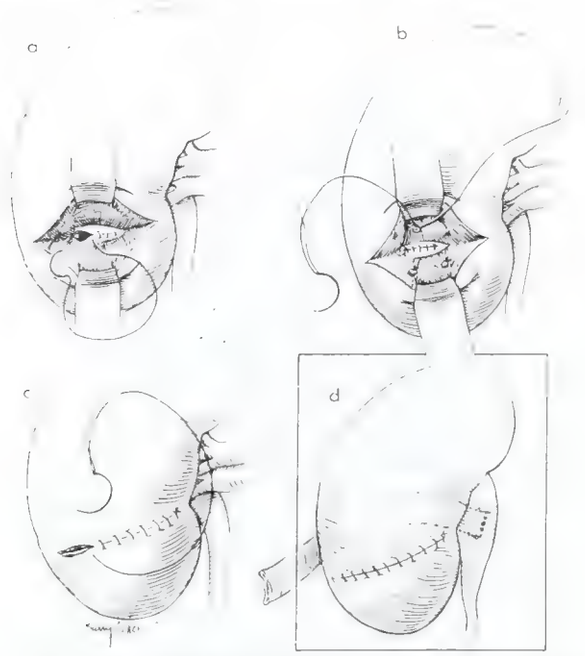
(2) Antibiotics to prevent infection of the perirenal hematoma with formation of perinephric abscess

(3) Observations for signs of failure of conservative treatment:

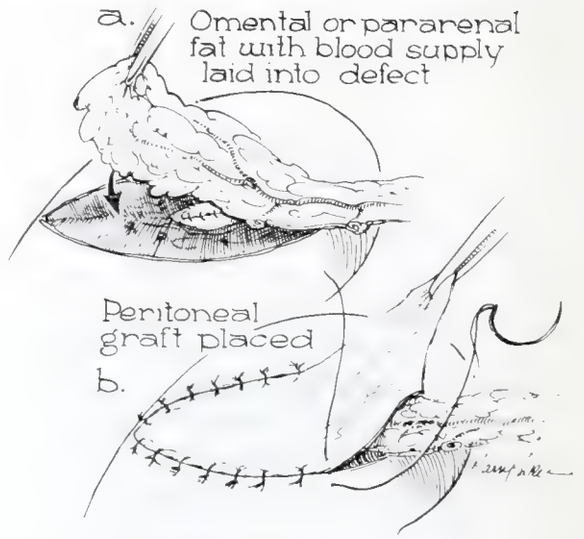
(a) Temperature elevation,

3. Surgical approach to the injured kidney. Exposure of the abdominal aorta and left renal vein through an incision in the posterior parietal peritoneum. Application of noncrushing vascular clamps to the appropriate renal artery and vein. Mobilization of the injured kidney and release of the perirenal tamponade only after vascular control.



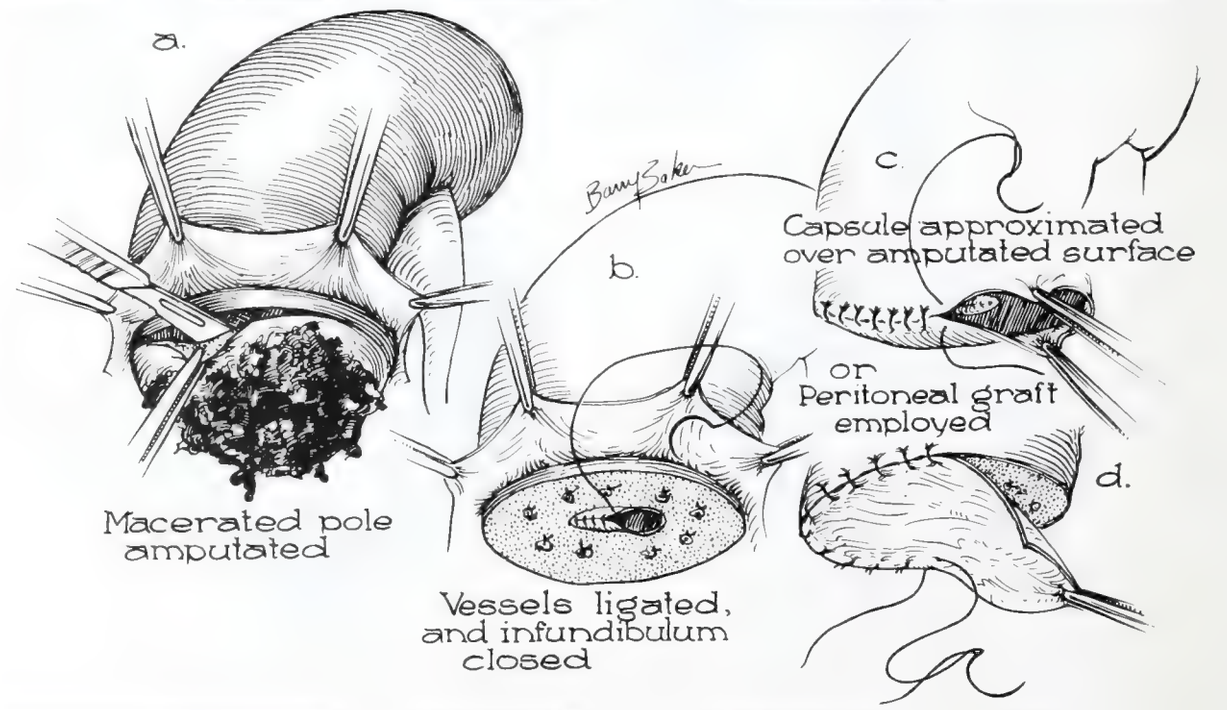


4. Technique of repair of simple renal laceration. (a) Watertight closure of the collecting system following adequate debridement of injured tissue. (b) Suture ligation of all visible bleeding vessels. (c) Reapproximation of the renal cortex and capsule. (d) Penrose drain pyelostomy or evacuation of blood clots where there has been extensive hematuria.



5. Technique of repair of extensive parenchymal defects where primary closure is not feasible. (a) Placement of live fat to obliterate dead space. (b) Reestablishment of capsular integrity with a free graft of peritoneum.

6. Surgical technique for treatment of extensive renal polar injury. (a) Guillotine amputation of injured tissue. (b) Suture hemostasis and primary closure of collecting system. (c, d) Alternate methods of reestablishing capsular integrity.



signs of perirenal infection
(b) Secondary hemorrhage (expanding flank mass, anemia, tachycardia, etc)
(c) Intravenous pyelogram prior to discharge
(d) Patient must be observed for several weeks to exclude hypertension of renal origin secondary to perirenal fibrosis, or vascular injury resulting in renal ischemia.

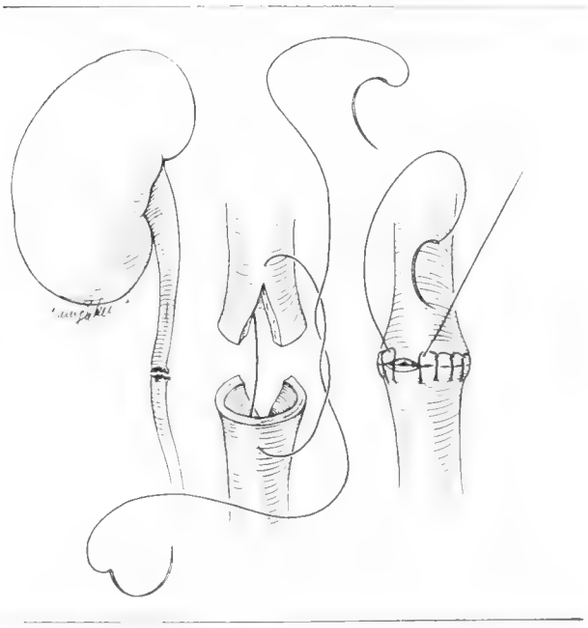
III. Ureteral Injury: Ureteral injuries of surgical etiology are decreasing as surgical proficiency increases. Ureteral injuries secondary to external violence, however, are increasing parallel to the overall increase in incidence of body trauma, and usually manifest themselves as intraperitoneal irritation. The ureters may be injured by penetration of a foreign body, or occasionally they may be avulsed by the contrecoup effect.

A. Diagnosis: Extravasation, when seen on excretory urography, is suggestive of injury. However, ureteral injury can be present and the intravenous pyelogram normal. If the intravenous pyelogram is normal and ureteral injury is suspected, a retrograde or bulb pyelogram should be made.

B. Principles of Treatment: Figs 7, 8

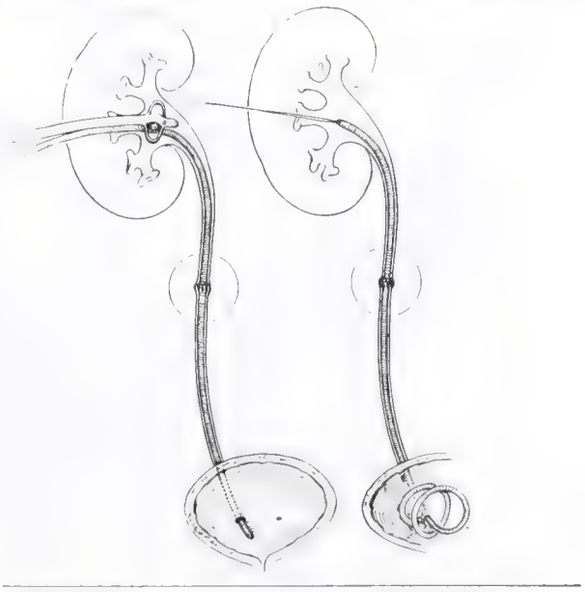
IV. Bladder and Prostatic Urethral Injury (Fig 9):

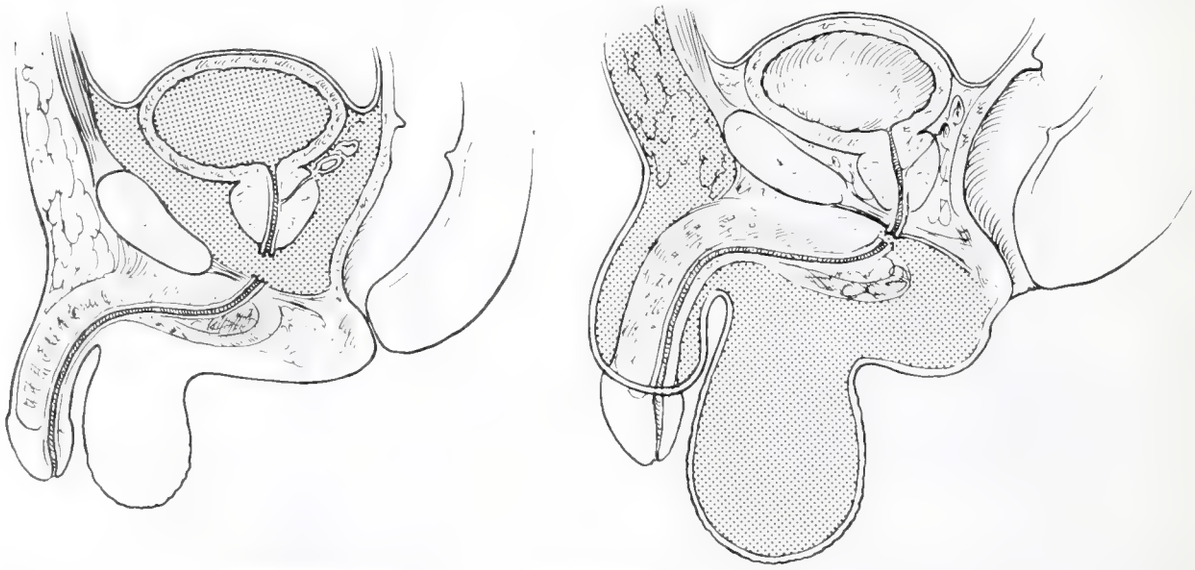
A. Mechanisms of Injury:
1. The bladder, in its empty or near-empty state, is located deep in the bony pelvis and is resistant to injury. The distended bladder, however, is easily ruptured. In most instances, rupture of the



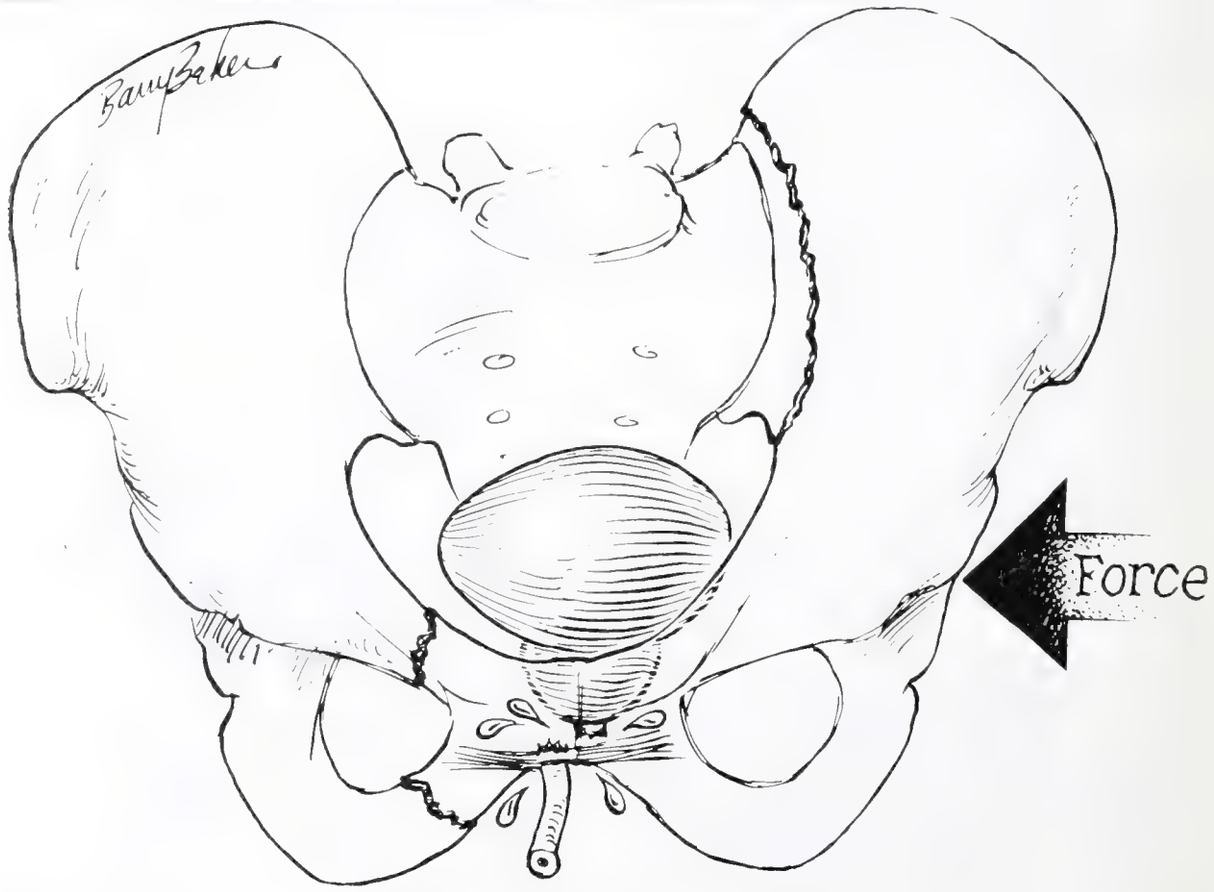
7. Technique of repair of injured ureter. Spatulation of opposing surfaces of the ureter after debridement of injured tissue. Meticulous watertight closure of the ureter employing 5-0 chromic catgut.

8. Alternate techniques of placement of stenting ureteral catheters where urethral tension, infection, or other factors might result in failure of primary healing.





9. (a) Typical location of hematoma and urinary extravasation in injuries to the extraperitoneal portion of the bladder or prostatic urethra. (b) Typical route of urinary extravasation and blood collection with injury to the urethra distal to the urogenital diaphragm.



10. Typical mechanism of injury to the urethra at the junction of the prostatic apex and the membranous urethra. Note the shearing force applied to the urethra as the pelvic girdle is fractured.

urinary bladder occurs when it is distended, and usually results from the bladder's striking a steering wheel during deceleration in an automobile accident.

2. Prostatomembranous Urethra: Almost invariably, this injury is caused by the shearing effect at the rigid attachment of the apex of the prostate to the membranous urethra in association with fracture of the bony pelvis. Rarely, this injury may result from severe straddle trauma (Fig 10).

B. Diagnostic Studies:

1. Physical Examination:

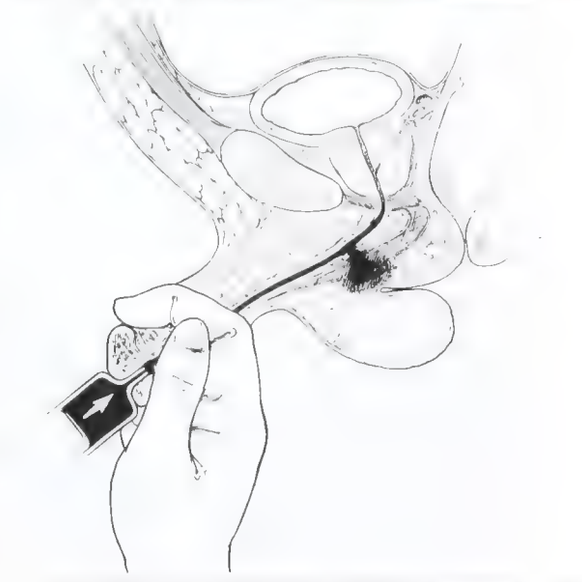
a. Ruptured Bladder: Board-like rigidity of the abdomen, with hypotension and inability to urinate, is frequently seen.

b. Prostatic Urethra: The signs of the ruptured bladder, plus fluctuation in the area of the prostate on rectal examination due to a collection of blood or urine in this area, are frequently noted. With complete severance of the prostatic urethra, there is striking absence or displacement of the prostate on rectal palpation (Fig 11).

2. Radiographic Study: The two most important radiographic studies are the retrograde urethrogram and the retrograde cystogram. Too often, adequate delineation of the urethra is missed because of the hasty insertion of a urethral catheter, which may bypass a significant urethral laceration. The retrograde urethrogram is an innocuous and easily performed study in trained hands, and should be carried out any time vesical or urethral injury is even slightly suspected. This study is obtained by placing the patient in the oblique position on the x-ray table, and gently and slowly inserting into the urethral meatus 30 cc

11. Rectal-digital findings with complete laceration of the prostatic urethra. There is striking absence of the prostate to palpation, and a balloon-like consistency of the pelvic hematoma.

12. The technique of retrograde urethrography. The tip of a large syringe is impacted into the urethral meatus and viscous contrast media injected in a retrograde manner.



of viscous contrast medium (Fig 12). Regular intravenous pyelography media alone or mixed with an equal amount of water or water-soluble surgical lubricant serves this purpose well.

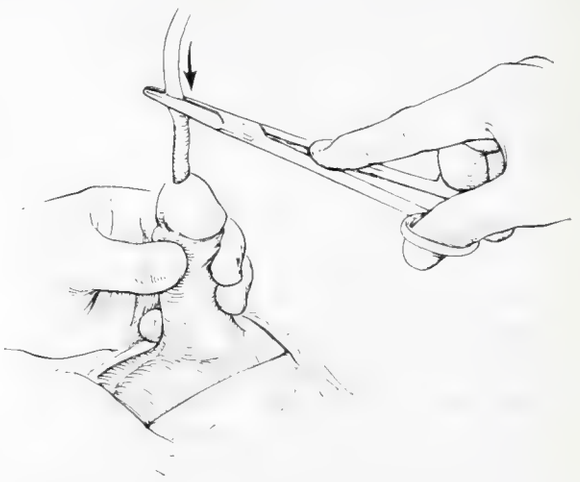
If retrograde urethrography reveals no urethral injury, vesical injury can be evaluated by means of retrograde cystography. The patient's meatus is prepared with a suitable antiseptic solution, and the penis is isolated by sterile drapes. A #14 or #16 Foley catheter is introduced with sterile forceps or by using sterile gloves (Fig 13).

It is important that the catheter not be forced, and it must be remembered that if there is prostatic, urethral, or vesical laceration, the catheter may pass from the urinary tract into extravesical tissue planes or the peritoneal cavity.

The bladder is filled with a contrast medium (a 10% solution of intravenous pyelography media is excellent) under gravity by inserting the barrel of an Asepto syringe into the end of the Foley catheter and pouring contrast medium into the syringe which is held as high above the patient as the Foley catheter will permit until the flow stops or the patient complains of a full bladder (Fig 14). An anteroposterior x-ray is obtained, the contrast medium is drained from the bladder, and a second anteroposterior x-ray is obtained immediately to demonstrate any dye which might have extravasated anteriorly or posteriorly.

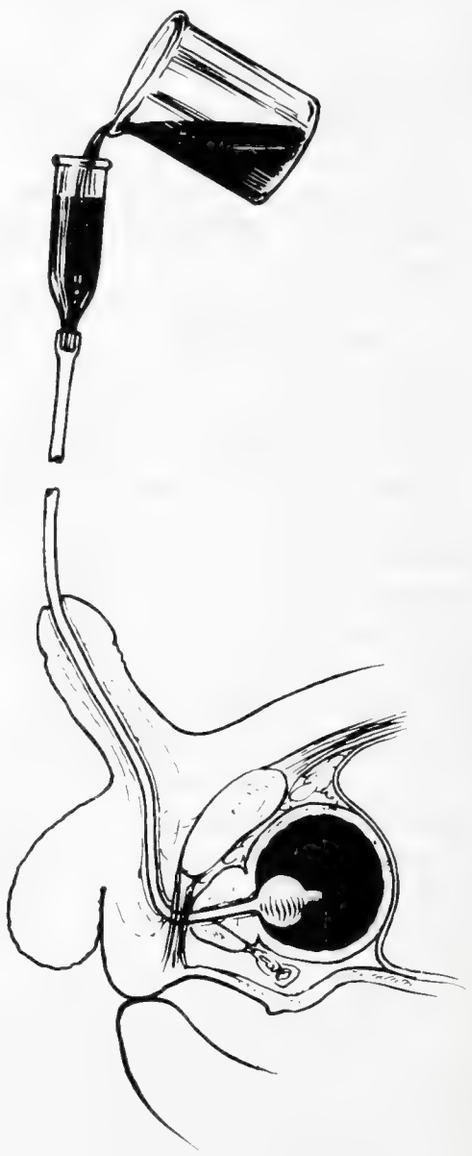
C. Treatment:

1. Bladder (Fig 15): Prompt diagnosis and surgical treatment of ruptured bladder is especially important, as the mortality rises rapidly with delay in surgery.
2. Prostatic Urethra (Fig 16):
   (a) Primary anastomosis of severed urethral margins is preferred and

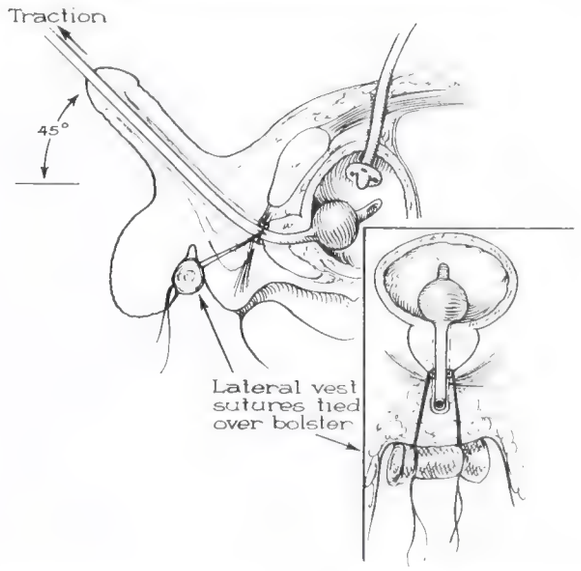


13. Simple technique of sterile catheterization. After preparation and draping of the genitalia, a catheter is introduced with a sterile forceps.

14. Technique of retrograde cystography.

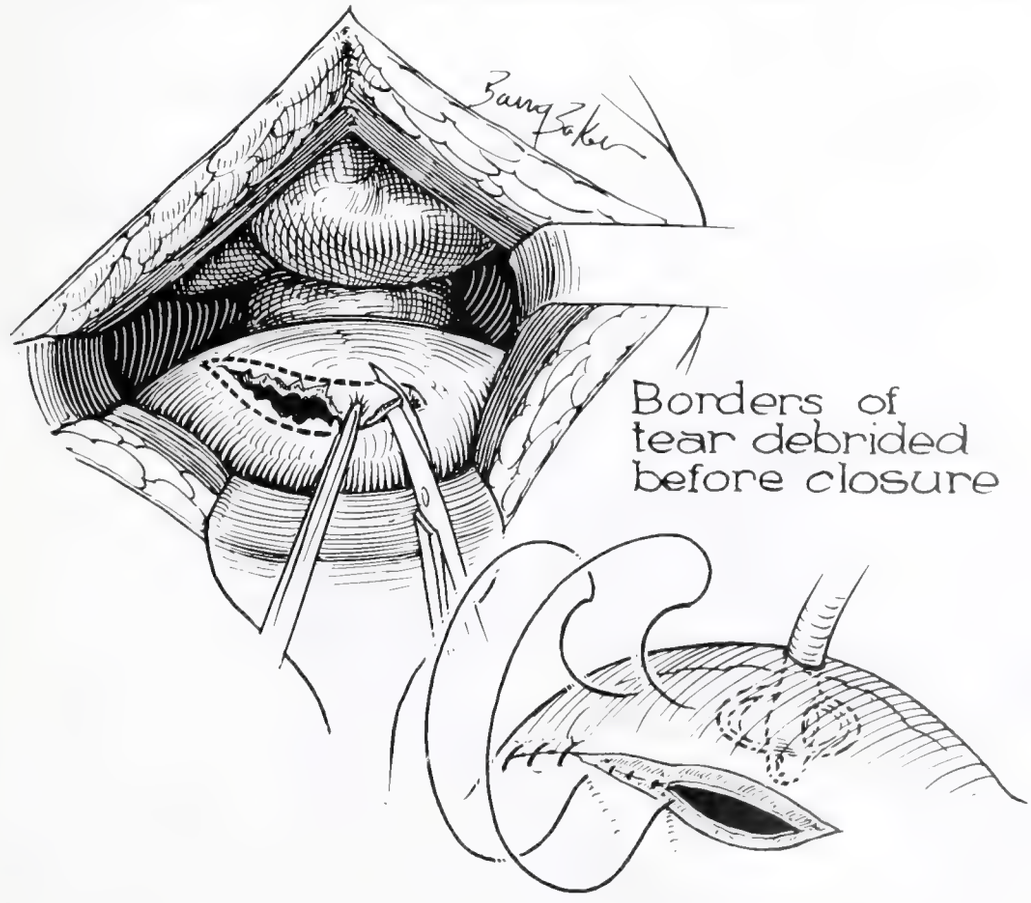


should be done when possible.
(b) Vest sutures are carried from the apex of the prostatic urethra through to the perineum where primary suturing is not possible.
(c) Foley catheter is placed under slight traction for 24 hours and left indwelling for 14 to 45 days depending on how soon the surgeon feels healing may have occurred.
(d) Diversion of urine always should be accomplished by suprapubic cystostomy in the male because the urethral catheter may become dislodged accidentally, or its removal may be dictated by the onset of urethritis. In the female, a urethral catheter is the only form of diversion usually required.
(e) Adequate evacuation of hematoma and bone fragments and prolonged extraperitoneal drainage of the perivesical space is necessary.
(f) Simple suprapubic cystostomy can be done by the nonurologist, with

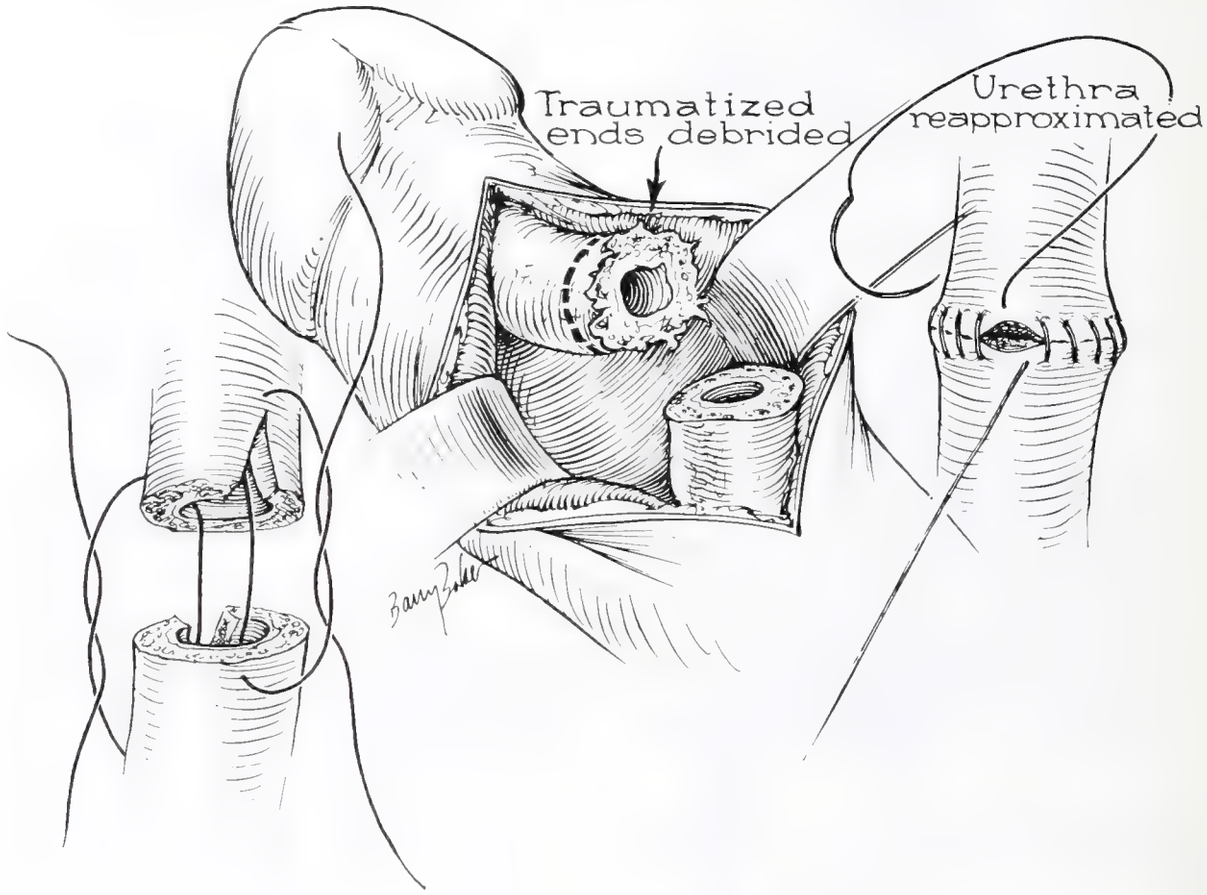


16. Diagrammatic representation of technique of repair of prostatic urethra with illustration of primary approximation and placement of vest perineal traction sutures.

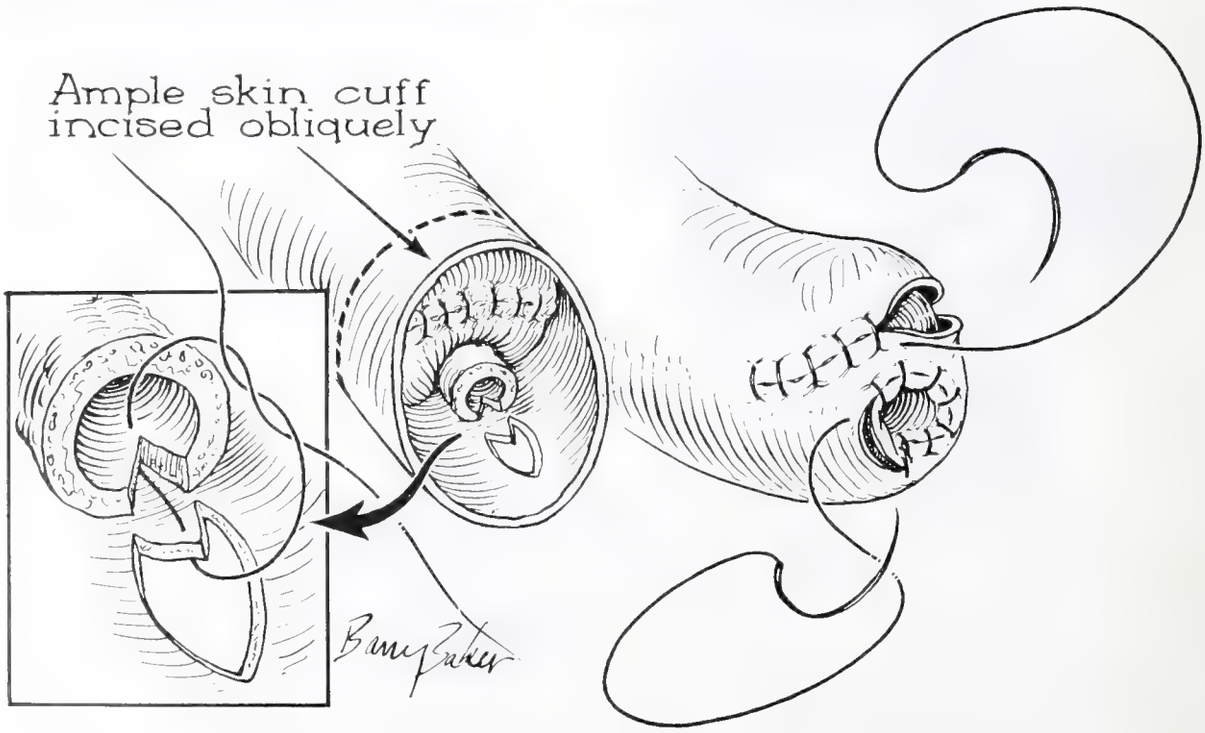
15. Technique of debridement and repair of ruptured bladder.



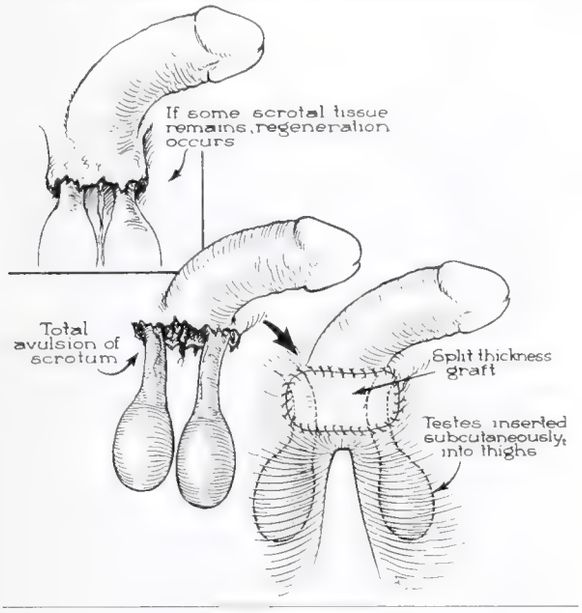
17. The injured urethra is mobilized from the corpora cavernosa. The injured ends are debrided, spatulated, and closed in a watertight fashion.



18. Repair of the amputated penis. Corporal bodies are oversewn with horizontal mattress sutures. A new spatulated urethral meatus is created as demonstrated.



20. Expectant treatment where remnant of scrotum remains. With total avulsion of the scrotum, the testes are implanted into the medial aspect of the thigh.



repair of the laceration later by a urologist. However, primary repair is preferred if there is a urologic surgeon available.

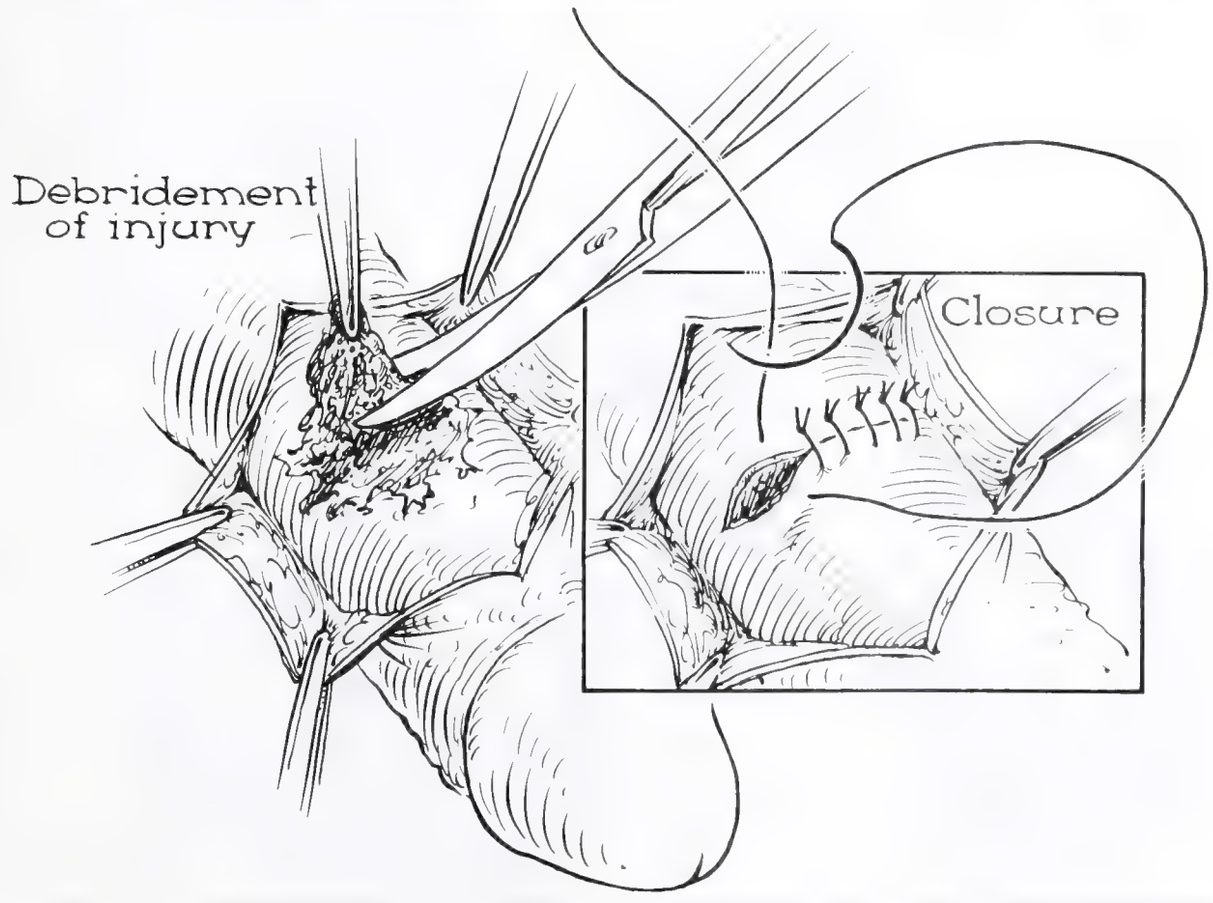
V. Anterior Urethra:

A. Mechanism of Injury: Usually straddle injury

B. Diagnosis:
1. Physical examination
2. Urethrography
3. Panendoscopy

C. Treatment: Exploratory surgery should be performed, and all but the most minor

19. Debridement and repair of laceration of the corpus cavernosum.



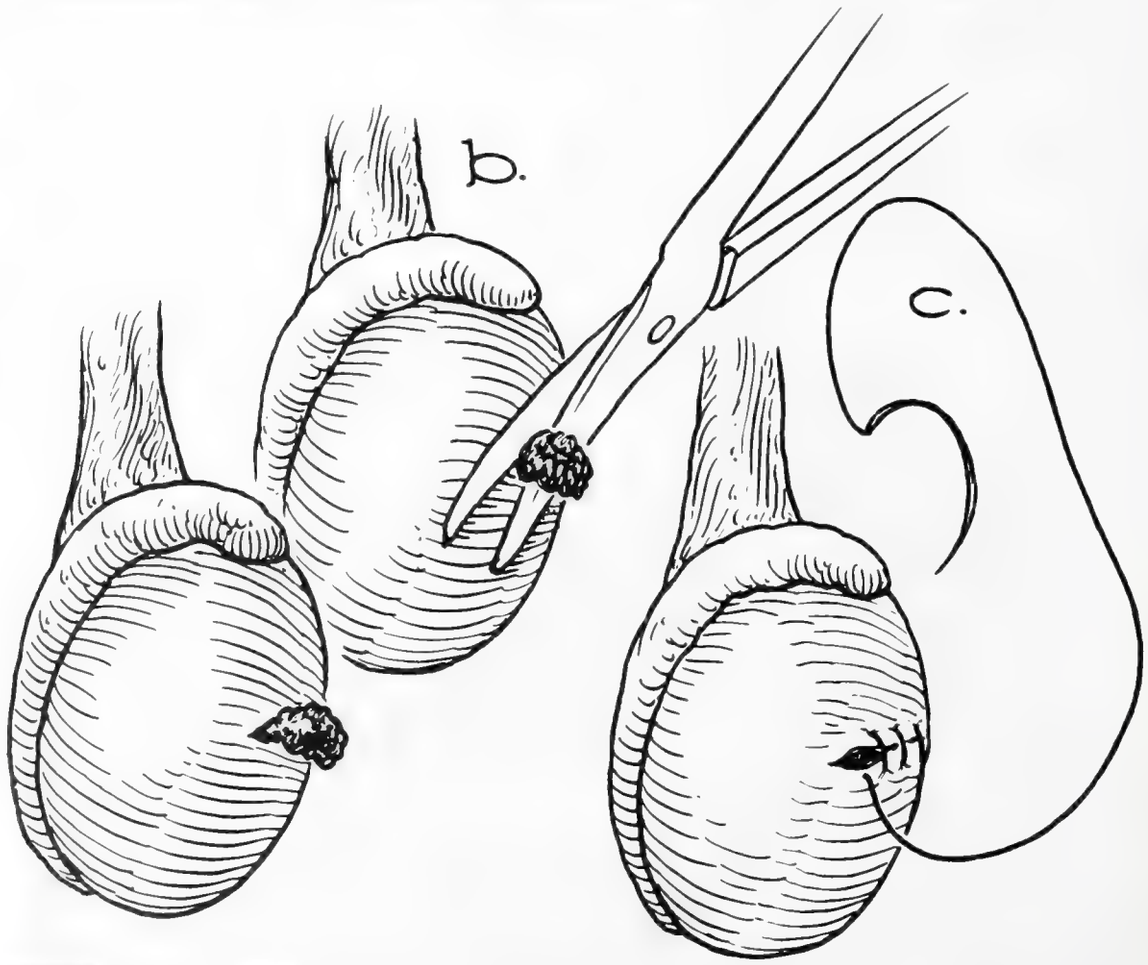
puncture wounds of the urethra should be treated with primary excision and repair to obviate dense fibrosis and stricture resulting from nonsurgical treatment of urethral laceration. The principles of treatment include (Fig 17):

1. Precise delineation of the location and extent of injury by urethrography and urethroscopy
2. Wide mobilization of the urethra from the cavernous bodies allowing debridement and reanastomosis under no tension
3. Spatulated, watertight reanastomosis
4. Adequate periurethral space drainage
5. Proximal urinary diversion (suprapubic cystostomy) only if primary healing is not expected or watertight anastomosis is not obtained. If watertight anastomosis is obtained and primary healing anticipated, a Foley catheter is employed for 24 to 48 hours.

D. Nonoperative Treatment:

1. Indications: Contusion or very minor puncture-type wounds or nicks of the urethra
2. Regimen: Antibiotics alone, or inci-

21. Excision of devitalized seminiferous tubules and primary reapproximation of tunica albuginea.



sion and drainage of periurethral hematoma with antibiotic therapy; Foley catheter for seven to ten days or until external tract is healed

VI. Penis:

A. Amputation: Fig 18

B. Fracture or Laceration of Corpus Cavernosum: Fig 19

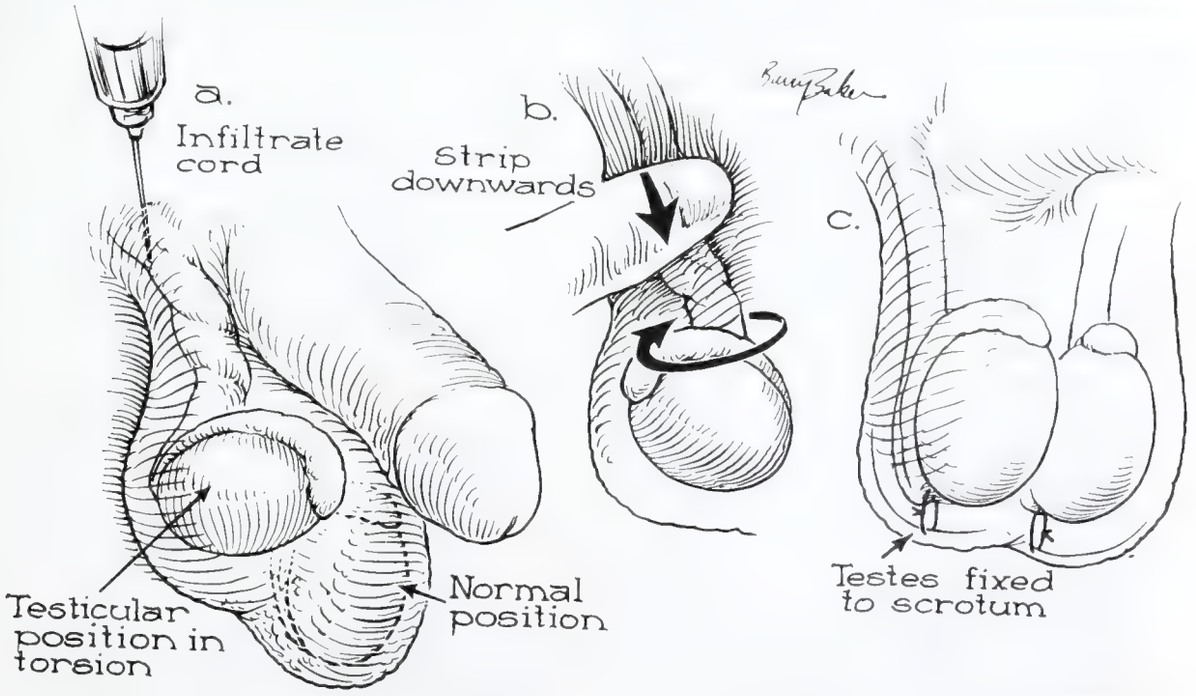
C. Avulsion of Penile and Scrotal Skin:
1. Initial Care: There should be minimal debridement of skin in order to leave all possible tissue and reduce secondary grafting. Scrotal skin will regenerate if any remnant is left intact.
2. Definitive Care: When any remnant of scrotal skin remains intact, scrotal regeneration usually will occur, and during this time simple topical care of the granulating surface should be carried out. Grafting of penile skin with split-thickness graft should be accomplished at an appropriate time. Skin grafts over the testes usually are unsatisfactory. When spontaneous regrowth of scrotal skin does not occur, the most satisfactory management of the testis is implantation into the subcutaneous tissue of the medial aspect of the thigh (Fig 20).

VII. Testis:

A. Mechanism of Injury

B. Principles of Surgical Treatment:
1. Any laceration of the tunica albuginea of the testis should be treated by debridement and primary repair to ob-

22. (a) Cephalad displacement and lateral rotation of the testis with torsion of the spermatic cord. Technique of infiltration of the cord with local anesthetic is illustrated. (b) Technique of nonoperative reduction of torsion of the spermatic cord. (c) Definitive surgical correction of the congenital deformity allowing torsion of the spermatic cord.



viate secondary hemorrhage, infection, and necrosis. Any viable part of the testis should be preserved for possible hormone production. The tunica vaginalis should be excised to prevent hydrocele.

2. Technique (Fig 21): Devitalized seminiferous tubules or seminiferous tubules which cannot be covered by tunica albuginea should be excised, and hemostasis must be obtained. The tunica albuginea can be closed with a continuous suture of 4-0 chromic catgut.

C. Nonoperative Regimen:

1. Indications: Testicular contusion
2. Technique: Bed rest, elevation, antibiotics, and ice packs during the first 24 hours

D. Torsion:

1. Appendages: The diagnosis is to be considered in any patient with sudden onset of scrotal pain. The strangulated appendage may be demonstrated by thorough, gentle palpation of the scrotal contents and by the demonstration of a small, bluish, tender mass, usually at the upper pole of the testis or epididymis. The treatment is surgical excision.
2. Spermatic Cord: The absence of fixation of the testis to the inferior aspect of the scrotum provides the potential for torsion of the testis on its spermatic cord. The incidence of bilaterality of this defect is 30%. Diagnosis is suggested by sudden onset of scrotal pain, with or without coincident trauma. It may occur at night during bed rest.

The testis lies horizontal and is retracted superiorly. In any patient in whom this diagnosis is entertained (even if epididymitis seems to be more likely), infiltration of the spermatic cord at the level of the external ring should be carried out with 1% Xylocaine to allow careful palpation of the spermatic cord and scrotal contents (Fig 22a). Most torsions of the spermatic cord of recent origin can, after infiltration of the spermatic cord, be reduced by stripping the spermatic cord between the thumb and forefinger inferiorly from a point above the location of the torsion (Fig 22b). Definitive treatment is surgical exploration of the scrotum, excision of the tunica vaginalis, and suture fixation of the tunica albuginea of the testis to the inferior aspect of the scrotum (Fig 22c). This must be done bilaterally because of the high incidence of bilateral torsion.

This comprehensive review article was prepared for *Texas Medicine* through the cooperation of Fred M. Taylor, MD, director, Office of Continuing Education, and C. Eugene Carlton, Jr., MD, Division of Urology, Baylor College of Medicine, Houston.

Dr. Carlton, Division of Urology, Baylor College of Medicine, Houston, TX 77030.

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Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

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Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

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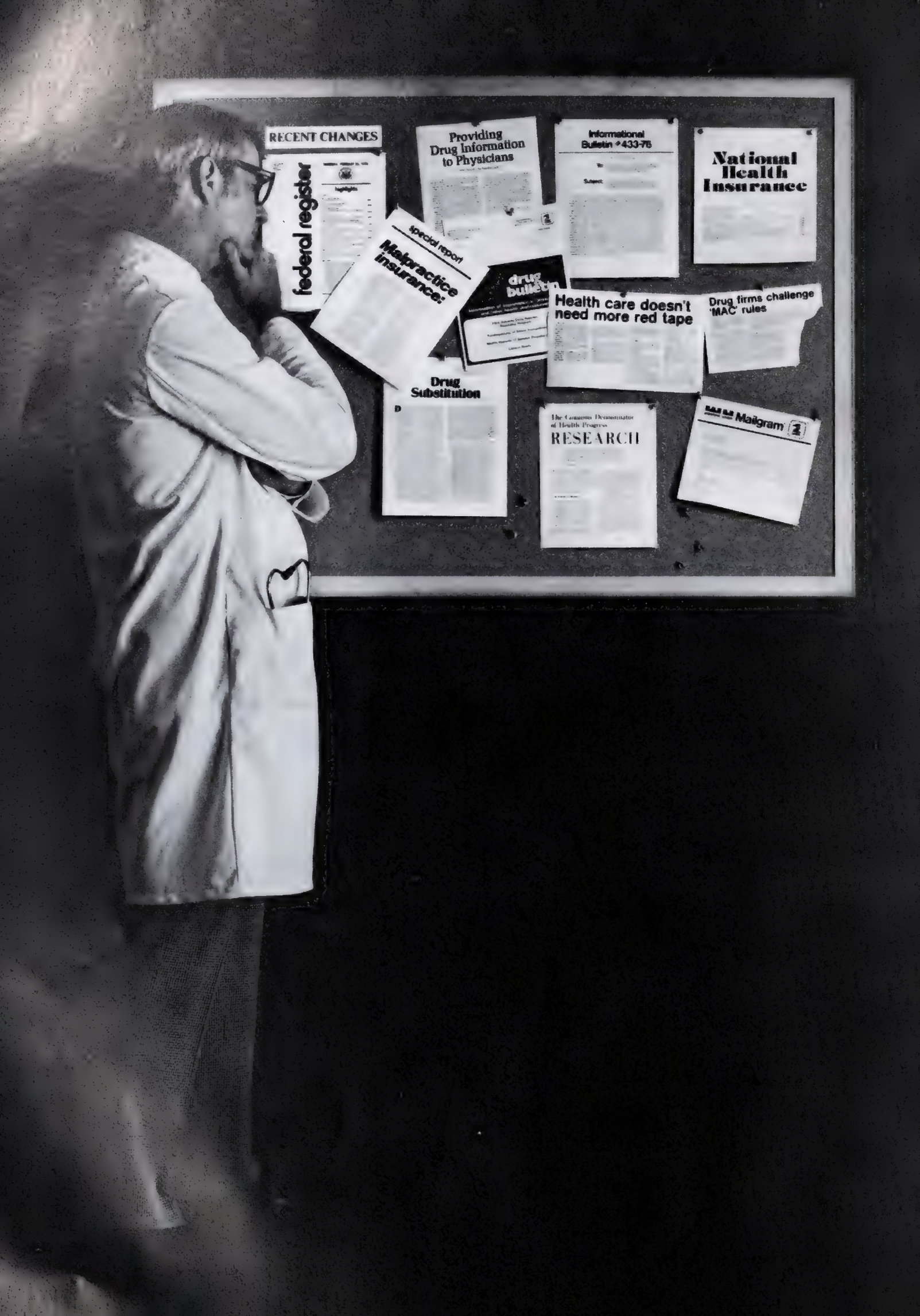
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THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

P·M·A
Pharmaceutical Manufacturers Association
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Skin grafting: fallacies and facts

Melvin Spira, MD, DDS; Alfred I. Blue, MD

A skin graft consists of epidermis and dermis cut from a donor site and transferred, as a free graft, to a recipient site. Grafts are classified as split-thickness grafts, which consist of epidermis and upper dermis, or as full-thickness grafts, which include the epidermis and all of the dermis. While skin grafts may be precisely defined, the art of skin grafting is not as exact. During the past century, many diverse techniques have been described, leading to an even larger number of modifications. There exists a wide variety of misconceptions and fallacies relating to the principles and practices of skin grafting. Our thoughts on a few of the more common fallacies are presented to aid the surgeon in deciding when, where, and how to employ autogenous skin grafts.

1. Fallacy: Thinner skin grafts always have a better chance of taking than do thicker grafts.

Fact: While this may be true in an uncontaminated surgical wound and over sites such as cancellous bone, split-thickness skin grafts must include a moderate amount of dermis if they are to survive. In a granulating wound, exudation directly proportional to the degree of quantitative bacterial contamination autolyzes the dermis until a true capillary circulation is established. If there is insufficient dermis in a thin graft to survive through the stage of plasmatic circulation, inosculation, and the development of the capillary circulation, the graft will necrose.

2. Fallacy: Shrinkage or contraction of a skin graft is dependent on, and always inversely proportional to, its thickness.

Fact: Skin grafts placed directly on bone, over bony prominences, or on a bed of muscular tissue, will not contract as will skin grafts placed on granulating wounds over body surfaces that are highly mobile, for example, in the anterior neck area. Secondary contracture, as outlined by Grabb,[1] is influenced by three factors. The first factor involves the recipient bed. The more rigid the recipient bed, the less the skin graft contracts. Next is the thickness of the skin graft. Thicker grafts have somewhat less tendency to undergo secondary contracture, and full-thickness skin grafts show the least degree of late contracture. The final factor relates to the take of the skin graft. The more complete the take, the less the contracture. Contraction and peripheral epithelialization are involved where there is partial loss of the skin graft. In areas where partial loss of the graft occurs, healing is by contraction and epithelialization, the former from the underlying bed and the latter from surrounding skin.

3. Fallacy: One should avoid using a hairy area as a donor site for a skin graft, for fear of transplanting the hairs.

Fact: The hair follicles are located in the deepest portion of the reticular layer of the dermis or in the upper subcutaneous tissue subjacent to the dermis. When taking an extremely thick split-thickness skin graft, one might be concerned about the possibility of transplanting hair, but only if the graft is employed within a mucous-membrane-lined cavity such as the mouth or vagina. Even in donor sites such as the scalp, where hair growth may be very thick, the follicles invariably lie deep and below the dermis. Hair transplantation, even when desirable, is almost impossible unless one takes the full depth of the skin as well as a portion of the underlying subcutaneous tissue, as is done in the transfer of punch grafts for the surgical treatment of baldness.

From the Cora and Webb Mading Department of Surgery, Division of Plastic Surgery, Baylor College of Medicine, Houston.

4. Fallacy: All third-degree burn wounds should be treated with skin grafts, while all second-degree burn wounds should be allowed to heal spontaneously.

Fact: Small third-degree skin losses of less than 1 cm need not be grafted. Almost all deep second-degree burn wounds should be considered for debridement and grafting when healing is delayed beyond three weeks, and even earlier in cases involving critical sites such as the hands. Remaining nonviable dermis should be removed and skin grafts applied rather than permit a greatly delayed spontaneous epithelialization with a resultant thin, inelastic integument on a deeply scarred base.

5. Fallacy: Enzymatic debriding agents are useful in cleaning up wounds in preparation for skin grafting.

Fact: These agents, which are expensive and may be painful, have little more to offer than the ordinary "wet to dry" dressings employing Kerlix-moistened saline gauze, wet every four hours and changed every eight hours.

6. Fallacy: Granulation tissue should be debrided before skin grafting.

Fact: Flat, firm, red granulation tissue, exhibiting minimal exudation, provides a satisfactory recipient area for skin grafts. Hypertrophic, grayish red, soft, friable granulation tissue interspersed with questionably viable dermal elements, particularly where the granulation tissue is long-standing, does not, and should be debrided.

7. Fallacy: In certain cases, pinch grafts should be employed for skin graft coverage.

Fact: Pinch grafts mutilate donor sites and have no place in our surgical techniques. With the advent of the battery-driven small surgical dermatome, which has a disposable head, a medium split-thickness skin graft may be taken accurately and rapidly using local anesthesia.

8. Fallacy: Great experience is necessary to take a large split-thickness skin graft.

Fact: With the advent of the Padgett Hood dermatome, subsequent introduction of the electric dermatome, and most recently the utilization of the air-powered dermatome, the taking of a skin graft of adequate size and desired thickness requires little experience.

9. Fallacy: Parenteral antibiotic therapy always should be employed when grafting skin onto granulating, contaminated wounds.

Fact: Except when dealing with streptococcal contamination of a burn wound, in which case penicillin is administered parenterally, such antibiotics have little place or effectiveness in reducing either quantitative or qualitative bacterial count in granulating wounds.

10. Fallacy: It requires an experienced surgeon to determine when a wound is ready for skin grafting.

Fact: The presence of flat, red, firm granulation tissue surrounded by a thin pellicle of peripheral epithelialization and ingrowth of adjacent peripheral skin indicates, even to the neophyte, that the wound is ready and demands skin graft coverage.

11. Fallacy: Skin grafts must be taken and applied in the operating room under sterile conditions.

Fact: Sterile conditions are not necessary for successful skin grafting. Smaller grafts may be taken and successfully applied in the emergency room, in the office, or even at the bedsides of some patients. The only real problem involves contamination and possible infection in the donor site. Where the graft has already been taken and stored in a refrigerator, it certainly can be applied at the bedside.

12. Fallacy: The best place to store skin is in a refrigerator at normal refrigerator temperature of 4 C (39.2 F).

Fact: The best place to store skin is in the patient's own donor site. Skin so stored may be removed relatively painlessly within the first week. These grafts, used on a suitable recipient site, evidence a better take than conventionally stored skin grafts. The next best place is in a refrigerator.

13. Fallacy: The patient is always more comfortable with the donor site dressed.

Fact: A donor site dressing may serve to protect the area during the recovery period, and if moist, helps absorb the initial capillary oozing from the donor bed. Certainly, the patient does experience some pain with removal of the dressing at 24 hours. However, with subsequent drying of the donor wound, the site becomes comfortable and quite unobtrusive within 24 to 48 hours following exposure. Exposure mitigates against an infected donor site. Fine mesh gauze, placed directly against the donor site wound at the time of surgery, is left undisturbed, as it serves as a scaffolding for underlying epithelialization.

14. Fallacy: Skin grafts should be sutured into place.

Fact: Thin and medium split-thickness skin grafts can be maintained nicely by paper tape applications. Suturing is time consuming and frequently causes bleeding. Usually, sutures must be removed. Thinner grafts placed over body surfaces that can be conveniently exposed need no fixation. Conversely, where primary contraction is a problem, thick-split and full-thickness grafts frequently require suturing, particularly if a stent is to be employed for immobilization and pressure.

15. Fallacy: Skin grafts will not take on exposed bone without periosteum.

Fact: While this may be true when grafting on cortical bone, certainly skin grafts, particularly thin grafts, take very nicely on cancellous bone. Examples are the mid-facial bones, including the nasal, maxillary, and malar bones, and those within the orbit.

16. Fallacy: Splints are effective and only need be employed to immobilize the grafted site until a take has been established.

Fact: When grafting very mobile areas (axilla, antecubital fossa, thumb web space, etc) splints may be needed during the first three months after skin grafting to reduce secondary contracture. In other areas, such as the neck, pressure splinting is employed to reduce contracture, inhibit hypertrophic scar formation at the junction of normal skin and graft, and to keep the skin graft smooth. Splinting is also useful, particularly in children, in dealing with burn scar joint contractures, especially when skin grafts have already been employed. Splinting in these cases may be used for several months to progressively correct a flexion contracture.

17. Fallacy: A patient should be kept in bed for one to two weeks following skin grafting of the lower extremity.

Fact: Small split-thickness skin grafts placed on recipient sites of the leg, but not directly over joint surfaces, may be mobilized within 48 to 72 hours after grafting, provided appropriate padding and double Ace bandage support are applied.

18. Fallacy: Skin grafts will not take on an anemic patient.

Fact: Anemia per se is not detrimental to the take of skin grafts. It may be a reflection of malnutrition and hypoproteinemia, which are deleterious to graft take. General anesthetics in the presence of severe anemia are not safe. When grafting large areas, blood loss may be extensive and may aggravate a preexisting hemoglobin deficiency.

19. Fallacy: All skin grafts should be inspected and redressed within five days after grafting.

Fact: While it is best to look at skin grafts placed on a granulating wound within 24 to 48 hours postoperatively, stented full-thickness grafts placed on a clean operative wound may be inspected, but certainly do not need removal of the stent and redressing within seven to ten days postoperatively. Pain at the recipient site is an indication for an early dressing change.

20. Fallacy: Mesh grafts are useful only where donor sites are limited.

Fact: Unexpanded mesh grafts are useful when resurfacing even small irregular wounds when possible tenting of sheet grafts may be a problem, or in grafting granulating wounds that previously were heavily infected. The mesh openings will allow escape of the exudate which, if allowed to accumulate, would inhibit capillary ingrowth and graft take.

21. Fallacy: A hematoma under a skin graft means loss of the graft.

Fact: Hematomas, even large ones, can be evacuated during the first two to four days by removing the dressing, lifting the skin graft, and evacuating the clot from the wound bed. The recipient site should be irrigated well, removing all clots from the wound itself and from the undersurface (dermis side) of the skin graft. The graft should be replaced carefully. This maneuver, even if performed several days after the original skin grafting, frequently will result in complete salvage of the graft, or at least a major segment of it.

22. Fallacy: Skin grafts will not hold up on weight-bearing surfaces.

Fact: Thick-split skin grafts can be employed to resurface defects on the plantar surface of the foot and can be expected to provide good service if the graft has been placed on subcutaneous tissue and not directly over bone. When placed directly on granulation tissue with an underlying bony prominence, sufficient external padding must be provided to cushion the graft and avoid a shearing force if durability is to be expected.

23. Fallacy: Skin grafts react to the sun like normal skin.

Fact: Premature exposure of skin graft to the sun may cause stimulation of melanophore activity and result in permanent hyperpigmentation.

24. Fallacy: Skin grafts retain the physical characteristics of the donor site.

Fact: Transplanted skin invariably undergoes a pigmentary change (hypopigmentation versus hyperpigmentation) and develops a color which may be grossly dissimilar to that of the donor site. When transplanted to an unscarred bed, skin grafts frequently develop sensory qualities or sensation very similar to those of the recipient adjacent skin. An example is the two-point discrimination in the fingertip. With full maturation, sweating in the graft may return in part, but never to the degree present prior to transplantation. Thinner grafts, which are placed as mucosal substitutes, especially in the vagina, tend to undergo a process referred to as vaginalization, wherein the tendency to keratinization is less and the cells within the grafted area develop a degree of glycogen activity similar to that of the adjacent mucosa.

25. Fallacy: All skin grafts must be immobilized with a pressure dressing.

Fact: A pressure dressing is unnecessary for the establishment of a plasmatic circulation between the grafted skin and underlying bed and subsequent capillary and fibrous tissue ingrowth for take. A dressing does serve to protect the graft from external trauma, will maintain the graft against an irregular surface when such a problem exists, and occasionally

may serve as a deterrent to capillary oozing following debridement. However, in some cases an overlay dressing might have a deleterious effect on the graft by its shearing effect.

26. Fallacy: Early dressing, or redressing, of the skin graft may be injurious.

Fact: Errors of omission are more common than errors of commission. Frequently, early inspection of a graft (within 24 to 48 hours) might uncover a hematoma or purulence under the graft. These could be managed to salvage the graft, the first by evacuating the hematoma and the second by "rolling out" the graft with a cotton-tipped applicator to express the exudate. When grafting skin onto a debrided granulating wound, early inspection is mandatory. Conversely, when a thicker graft is sutured or stented, or both, into position on a clean, surgically excised wound in which hemostasis is not a problem, it might remain dressed quite safely for several days.

27. Fallacy: In skin grafting, the patient usually will complain of more pain at the recipient site than at the donor site.

Fact: It is more natural for the pain to be worse at the donor site and less at the recipient site. When the patient complains of more pain in the skin-grafted wound than in the donor area, it is unusual and frequently heralds the onset of infection and subsequent graft loss.

This comprehensive review article was prepared for *Texas Medicine* through the cooperation of Fred M. Taylor, MD, director, Office of Continuing Education, and C. Eugene Carlton, Jr., MD, Division of Urology, Baylor College of Medicine, Houston.

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28. Fallacy: Skin graft donor sites heal uneventfully, without scars, and are of little concern to the surgeon.

Fact: Frequently, there is permanent hypopigmentation in donor sites, even with uneventful healing. Infection can lead to full-thickness skin losses. The resultant scarring may present as a gross deformity that is more noticeable than the original recipient site deformity. This is particularly true in females and in black patients.

Reference

1. Grabb WC, Smith JW: Plastic surgery, a concise guide to clinical practice. Boston, Little Brown & Co., p 49, 1973.

Drs. Spira and Blue, Department of Surgery, Division of Plastic Surgery, Baylor College of Medicine, Houston, TX 77030.

Evaluating the patient with dizziness: localizing lesions

J. Gail Neely, MD

Dizziness is a perception. It is a symptom, not a sign or a diagnosis. The task before the physician confronted with a "dizzy patient" is to precisely define three points: Where is the lesion? How bad is the lesion? Why does the lesion exist?

This article reviews current practices in lesion localization as it applies to the patient with dizziness.

General Information

Since dizziness is a perception that only the patient can describe, a detailed history allows the best initial survey of the difficulty. Descriptions of dizziness may range from light-headedness or giddiness to hallucinations of movement (vertigo).

A history suggesting hallucinations of movement (vertigo) usually indicates dysfunction that is vestibular in origin. Vestibular dysfunction may be peripheral (involving the vestibular labyrinth of the inner ear or the eighth cranial nerve, vestibular division) or central (involving the brain stem or midbrain).

Sensations of giddiness, lightheadedness, or instability may be vestibular or nonvestibular in origin.

The physical examination all too often fails to reveal positive evidence of dysfunction, but is primarily important because of the negative information that it may supply.

Using the detailed history and physical examination as a guide, the next step is the acquisition of objective information as to the site of the lesion.

Electronystagmography is the primary method through which it is possible to establish whether the lesion is vestibular or nonvestibular. If the electronystagmogram (ENG) is normal, particularly during a vertiginous attack, the lesion is nonvestibular in origin. If the ENG is abnormal, the difficulty recorded is vestibular.

Once a vestibular lesion has been documented, further lesion localization is required. This is possible through the combined use of electronystagmography and audiometry.

Audiometry allows precise lesion localization within the auditory system to the middle ear, inner ear, eighth cranial nerve, brain stem, or temporal lobe.

Roentgenograms of the temporal bone are part of the physical examination in evaluating the patient with dizziness, since the primary anatomic region of concern cannot be seen otherwise.

There is a group of individuals whose perception of dizziness clearly does not suggest vestibular dysfunction, and who have no demonstrable ophthalmological, neurological, or neuromuscular lesions. Periodic reexamination and reevaluation of these individuals is as important as, if not more important than, continued follow-up of those who have demonstrable vestibular or nonvestibular lesions.

Nonvestibular Versus Vestibular (Peripheral or Central Lesions)

Electronystagmography is a composite of several tests of the peripheral and central vestibular system and allows precise recording of the patient responses to varying vestibular and oculomotor stimuli. The tests employed within electronystagmography are: the test for gaze nystagmus, vertical and horizontal; optokinetic test, vertical and horizontal; test for positional nystagmus; Dix-Hallpike positioning test; sinusoidal tracking test; bithermal caloric stimulation of the peripheral vestibular system, which is analyzed to evaluate bilateral or unilateral weakness of the system, directional preponderance of the nystagmus induced, or failure of visual fixa-

	PERIPHERAL	CENTRAL
Bithermal Caloric Stimulation	x	
Dix-Hallpike Positioning Test (Classic)	x	
Optokinetic Test		x
Sinusoidal Tracking Test		x
Test For Gaze Nystagmus		x
Failure Of Visual Fixation To Suppress Caloric Nystagmus (F.F.S.)		x

1. Electronystagmography localizes lesions to the vestibular system and identifies them as peripheral or central.

2. The peripheral auditory test battery is employed to identify the site of hearing loss.

PERIPHERAL
TEST
BATTERY

PURE TONE THRESHOLDS
PB FUNCTIONS

IMPEDANCE

BCL
STAT
BEKESY

SISI
ABLB
TDT

BSER

tion to suppress the calorically-induced nystagmus; and finally, the detection of spontaneous nystagmus with eyes open and closed.

Lesions that fail to affect the vestibular or oculomotor systems result in normal findings on electronystagmographic examination.

Lesions affecting the peripheral vestibular system (vestibular labyrinth or eighth cranial nerve, vestibular division) are localized by the presence of a unilateral weakness on bithermal caloric stimulation or "classic" nystagmus on the Dix-Hallpike positioning test (Fig 1).

Central vestibular dysfunction may result in an isolated difficulty in performing the optokinetic test, the sinusoidal tracking test, or the test for gaze nystagmus, or may result in a failure of fixation to suppress the calorically-induced nystagmus (Fig 1).

Dysfunctions creating electronystagmographically demonstrable spontaneous nystagmus, directional preponderance to bithermal caloric stimulation, "nonclassi-

ABBREVIATIONS KEY	
FFS	Failure of Fixation Suppression
PB	Phonetically Balanced Words
BCL	Bekesy Comfortable Loudness Test
STAT	Supra Threshold Adaptation Test
SISI	Short Increment Sensitivity Index
ABLB	Alternate Binaural Loudness Balance Test
TDT	Tone Decay Test
BSER or BSERA	Brain Stem Evoked Response Audiometry
SSI-ICM	Synthetic Sentence Identification-Ipsilateral Competing Message
SSI-CCM	Synthetic Sentence Identification-Contralateral Competing Message
SSW	Staggered Spondee Word Test
HL	Hearing Level
MCR	Message to Competition Ratio

cal" nystagmus on the Dix-Hallpike positioning test, or nystagmus during the test for positional nystagmus are the result of vestibular lesions which cannot yet be localized within the vestibular system. They may be either peripheral or central. They may be on the right or left side.

Audiometric Localization of Lesions

Central and peripheral pathways for hearing and vestibular function are closely related anatomically. Once a vestibular lesion has been identified, it is quite often possible to identify, precisely, the site of lesion involving the auditory system.

It is not unusual to define an auditory

CENTRAL
TEST
BATTERY

PURE TONE THRESHOLDS
PB FUNCTIONS

IMPEDANCE

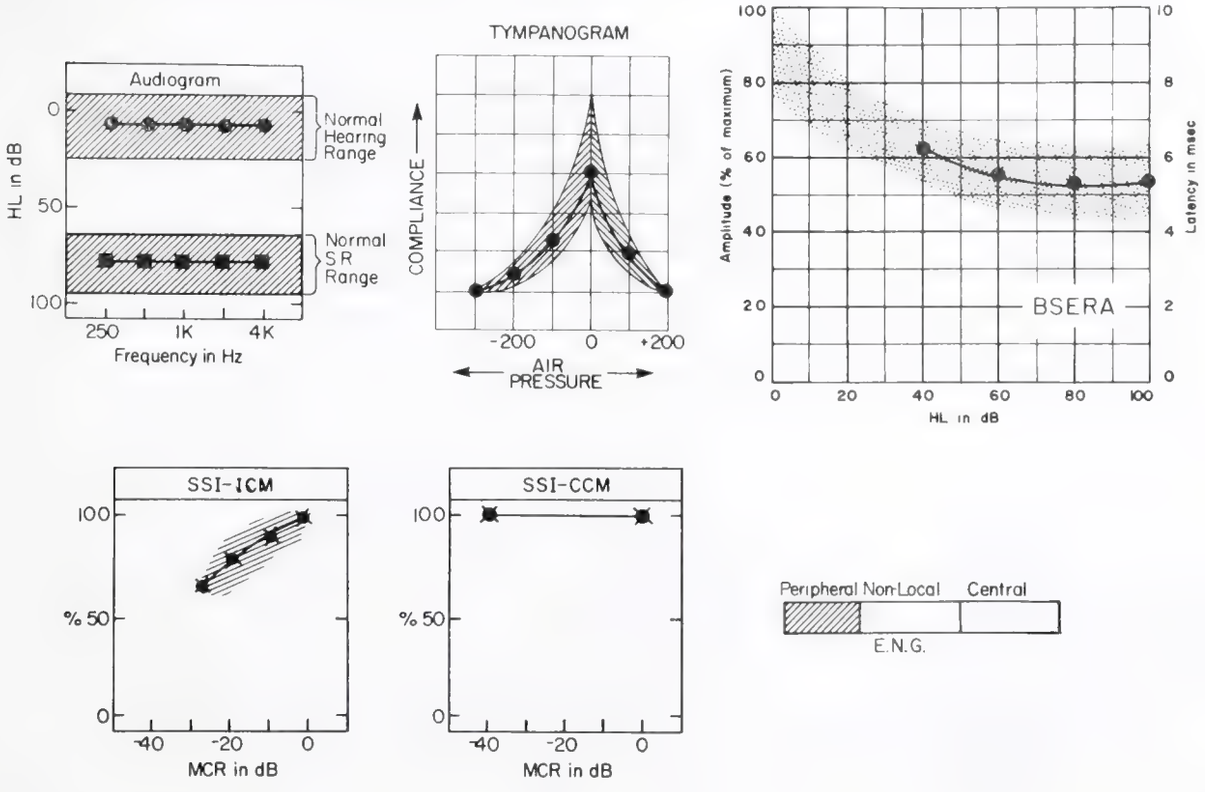
SSI-ICM
SSI-CCM

SSW

BSER

3. The central auditory test battery is employed when central auditory involvement is suspected.

4. Evidence of normal auditory function and peripheral vestibular dysfunction localizes the lesion to the vestibular division of the eighth nerve or the vestibular labyrinth only. One example of such a lesion is vestibular neuronitis.



dysfunction of which the patient is unaware. This is particularly true of lesions of the central auditory pathways.

Patients suspected of having a dysfunction of the middle ear, inner ear, or eighth cranial nerve will be given the peripheral auditory test battery (Fig 2).

Patients suspected of having a dysfunction at the brain stem or higher levels will be given a central auditory test battery (Fig 3).

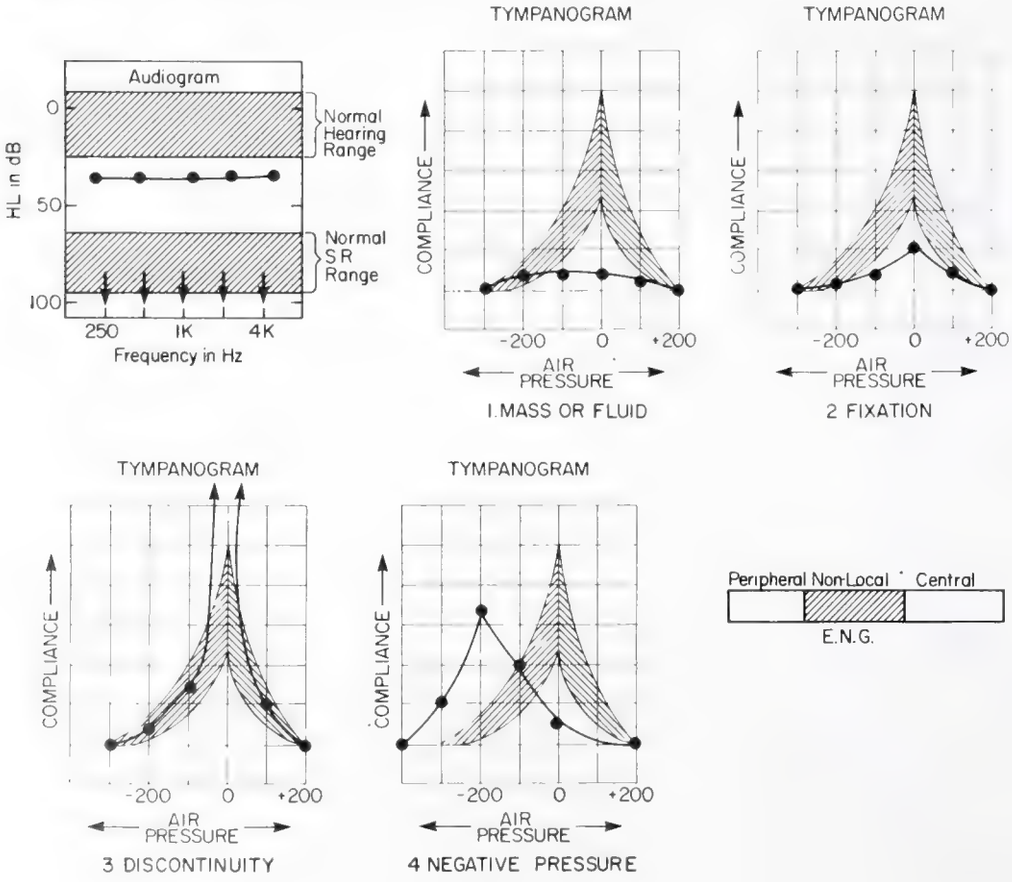
Examples of Lesion Localization

1. Audiologically Normal—Peripheral Vestibular Dysfunction

Normal auditory function associated with a peripheral vestibular lesion suggests a lesion of the vestibular division of the eighth nerve or an isolated vestibular labyrinthine lesion. An example of such a lesion is vestibular neuronitis.

Fig 4 shows normal hearing along the top of the audiogram, and crossed and uncrossed stapedius reflexes at normal intensities along the lower portion of the audiogram. The tympanogram, a portion of impedance audiometry, shows a normal type A curve indicating normal middle ear function. Brain stem evoked response audiometry (BSERA) results are normal. Synthetic sentence identification-ipsilateral competing message (SSI-ICM) test result shows the brain stem auditory pathways to be functioning normally. Synthetic sentence identification-contralateral competing message (SSI-CCM) test result

5. Middle ear dysfunction and vestibular dysfunction indicate a lesion in the middle ear. One example of such a lesion is an oval window fistula.



shows the temporal lobe auditory centers to be functioning normally. Electronystagmography reveals a peripheral vestibular lesion.

2. Middle Ear Dysfunction—Nonlocalizing Vestibular Dysfunction

Middle ear dysfunction with a variety of vestibular abnormalities suggests the lesion to be in middle ear. For example, a traumatic oval window fistula often will be associated with ossicular discontinuity; cholesteatomas with labyrinthine fistulae will show a mass effect on tympanometry. Otosclerosis with compromise of the superior vestibular nerve is associated with ossicular fixation.

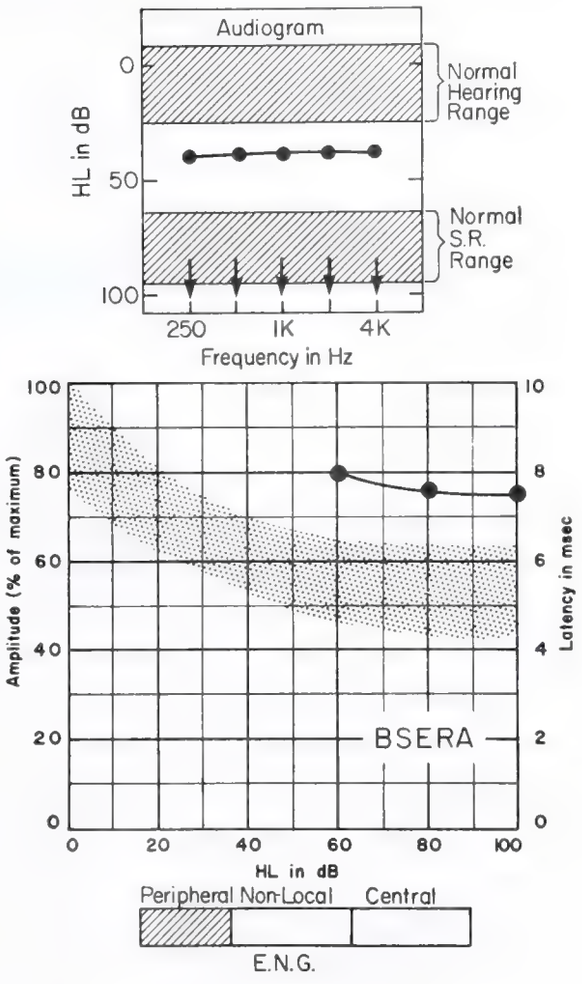
In Fig 5, the audiogram shows there to be a loss of hearing in the involved ear as well as a loss of the crossed and uncrossed stapedius reflexes. Tympanograms, associated with middle ear dysfunctions, may be (1) flat, as a result of a mass or fluid in the middle ear space; (2) A-shaped, but shortened as might be caused by fixation of the ossicular chain either congenitally or as a result of otosclerosis or trauma; (3) discontinuity of the ossicular chain as a result of a congenital abnormality, infection, or trauma; or (4) a negative pressure in the middle ear indicating a poorly functioning eustachian tube for a variety of causes. The ENG indications may vary from those of a nonlocalizing vestibular lesion to those of a severe peripheral hypofunction.

3. Cochlear Dysfunction—Peripheral Vestibular Dysfunction

A variety of disorders characteristically result in cochlear dysfunction with peripheral vestibular involvement. Meniere's disease, Cogan's syndrome, viral or bacterial labyrinthitis, and syphilis are a few such diffuse labyrinthine processes.

In Fig 6, the audiogram shows a peripheral hearing loss which, by other methods not recorded, would be sensorineural rather than conductive in nature. The crossed and uncrossed stapedius reflex measurements appear at remarkably normal intensities despite the peripheral hearing loss, indicating the distortion characteristics of a cochlear lesion. The brain stem evoked response audiometry is within nor-

6. Evidence of cochlear dysfunction and peripheral vestibular dysfunction localizes the lesion to both divisions of the labyrinth (pars inferior and pars superior, respectively). One example of such a diffuse inner ear disturbance is Meniere's disease.



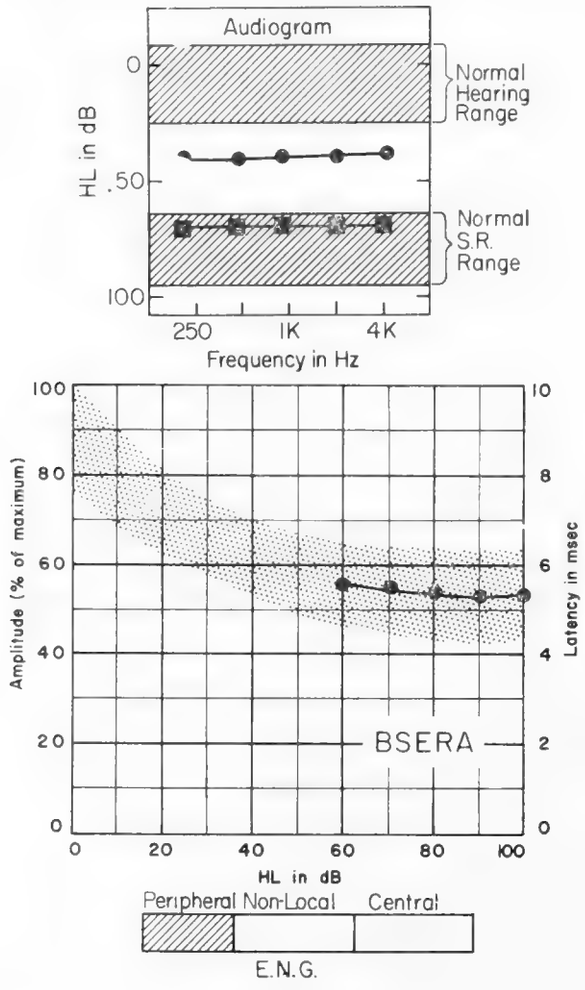
mal limits relative to latency measurements. The ENG shows a peripheral vestibular lesion.

4. Eighth Nerve Auditory Dysfunction—Peripheral Vestibular Dysfunction

Auditory dysfunction of the eighth nerve is rarely other than neoplastic in origin. Neoplastic involvement of the nerve may be from primary neurogenic tumors, such as neurofibromas or schwannomas, or tumors of adjacent structures, such as meningiomas, osteogenic tumors, chondrosarcomas, or glomus tumors. The eighth nerve involvement may begin, as it usually does, with the vestibular division and progresses to involve the auditory division.

In Fig 7, the audiogram shows a sensorineural hearing loss with a loss of the crossed and uncrossed stapedius reflexes. The brain stem evoked response audiometry is clearly outside the range of normal latency measurements. The ENG shows a peripheral vestibular lesion.

7. Eighth nerve auditory dysfunction and peripheral vestibular dysfunction localize the lesion to both divisions of the eighth nerve. One example of this is an acoustic tumor. (Meniere's disease is out of the question, even if the patient's symptoms suggest that diagnosis).



5. Brain Stem Auditory Dysfunction—Central Vestibular Dysfunction

Brain stem auditory lesions are insidious and usually do not cause great auditory difficulty to the patient; they are, however, very serious lesions. The vestibular system may or may not be involved; disorders that are severe enough to result in central vestibular lesions are usually quite serious. One example of such a lesion is multiple sclerosis.

In Fig 8, the audiogram shows no demonstrable hearing loss. Notable is the absence of the crossed stapedius reflexes and presence of the uncrossed stapedius reflex. The performance of the synthetic sentence indentification-ipsilateral competing message task clearly demonstrates an ear difference. Messages entering the right ear, crossing to the left brain stem, are within normal limits; whereas, messages entering the left ear, crossing to the right brain stem, are clearly outside of normal limits, indicating a right brain stem dysfunction. The synthetic sentence identification—contralateral competing message task performance shows no ear difference, indicating temporal lobe function to be normal. The ENG shows central vestibular dysfunction.

6. Temporal Lobe Auditory Dysfunction—Normal Vestibular Function

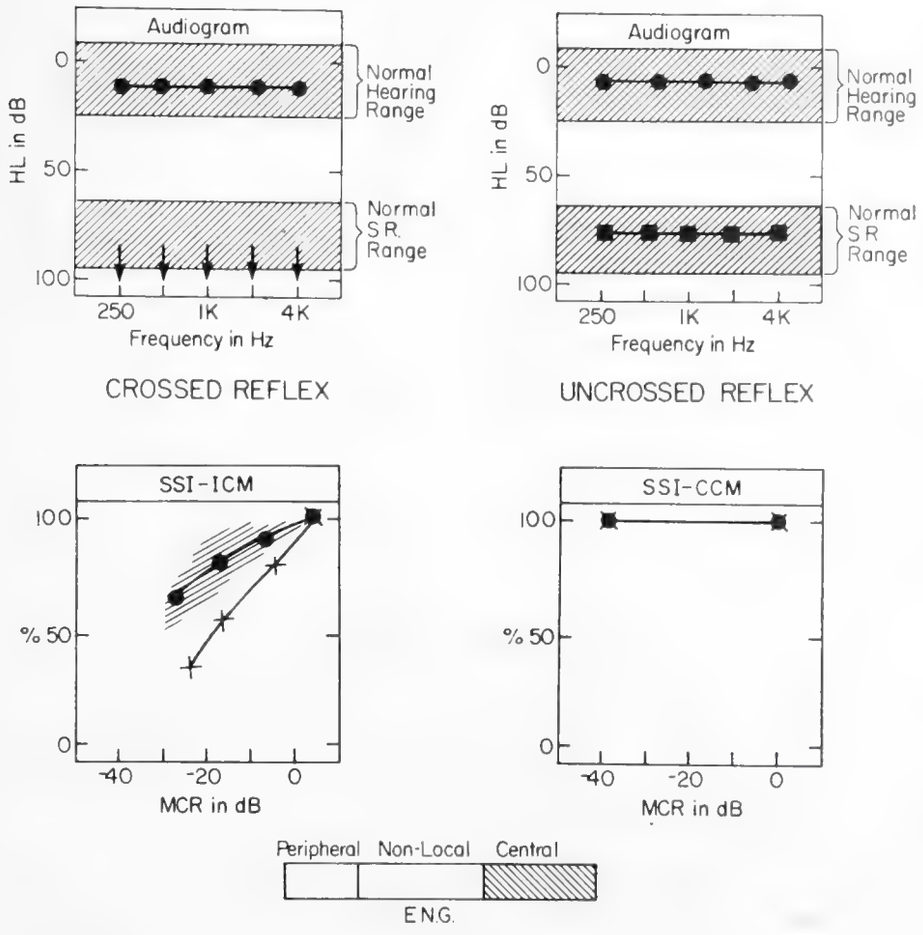
The auditory cortex is far from the vestibular pathways; rarely would one lesion affect both. Diffuse cerebrovascular arteriosclerosis is one usual cause for such diffuse involvement.

In Fig 9, the audiogram shows normal hearing and the presence of crossed and uncrossed stapedius reflexes at normal intensities. The performance of the synthetic sentence identification-ipsilateral competing message task shows that the brain stem handles auditory information well. The synthetic sentence identification-contralateral competing message task performance shows that speech information entering the right ear and crossing to the left temporal lobe is processed normally; whereas speech information entering the left ear and crossing to the right temporal lobe is not processed normally. The ENG is normal.

Integration of All Available Information

Dizziness is a perception. A thorough *history* and *physical* examination helps to characterize that perception and to suggest the dysfunctional anatomic site responsible for the perception.

8. Brain stem auditory dysfunction and central vestibular dysfunction localize the lesion to the central nervous system below the level of the tentorium. One example of such a lesion would be multiple sclerosis.



Electronystagmography objectively determines if the lesion is nonvestibular or vestibular, peripheral or central.

Audiometry is capable of discrete lesion localization within the closely related auditory system.

Roentgenograms of the temporal bone allow visualization of the bony anatomy most in question.

When this information is available, the task is to concentrate on the anatomic areas of dysfunction to define three points: Are the measured dysfunctions related in one disease process? Are these dysfunctions the cause of the patient's unpleasant

10. This list categorizes etiologies of dysfunction for any anatomic site. Dizziness, for example, may result from a specific vascular occlusion. Such occlusion may be arteriosclerotic (degenerative).

LIST OF POTENTIAL ETIOLOGIES
FOR ANY ANATOMIC SITE OR TISSUE TYPE

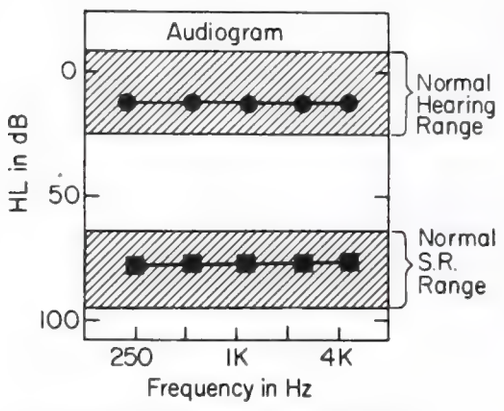
MECHANICAL
METABOLIC
MEDICINAL OR TOXIC

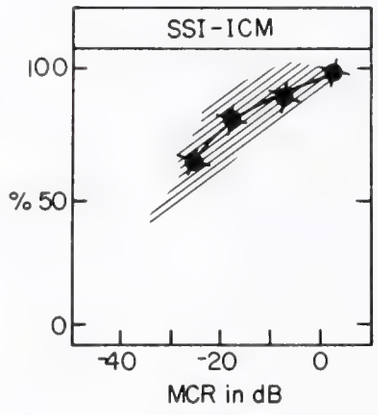
CONGENITAL
"COLLAGEN–AUTOIMMUNE-ALLERGIC"

NEOPLASTIC
INFECTIOUS
DEGENERATIVE OR IDIOPATHIC

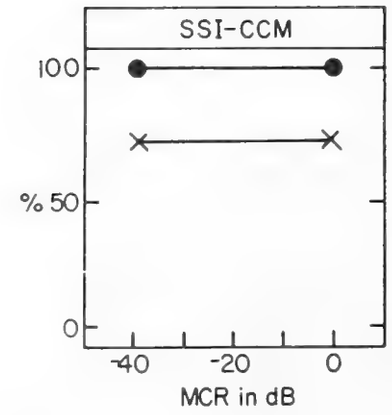
PSYCHOGENIC

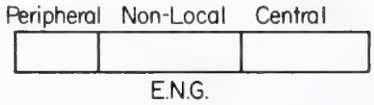
9. Temporal lobe auditory dysfunction and normal vestibular function localize the lesion to the auditory cortex of the opposite temporal lobe. One example of such a lesion is cerebral trauma.





CROSSED AND UNCROSSED REFLEXES





sensations? Why do these dysfunctions exist in the first place?

A precise understanding of the anatomy and physiology of each anatomic area and of the symptoms that are possible from dysfunctions of each area help answer the first two points.

Fig 10 lists possible etiologies for dysfunction in any anatomic site or tissue type. The permutations and combinations of anatomic sites and etiologic factors are enormous.

The search for the etiology of a dysfunction is therefore totally dependent upon the precise location of that dysfunction.

Fig 11 summarizes the current approach to evaluating the patient with dizziness.

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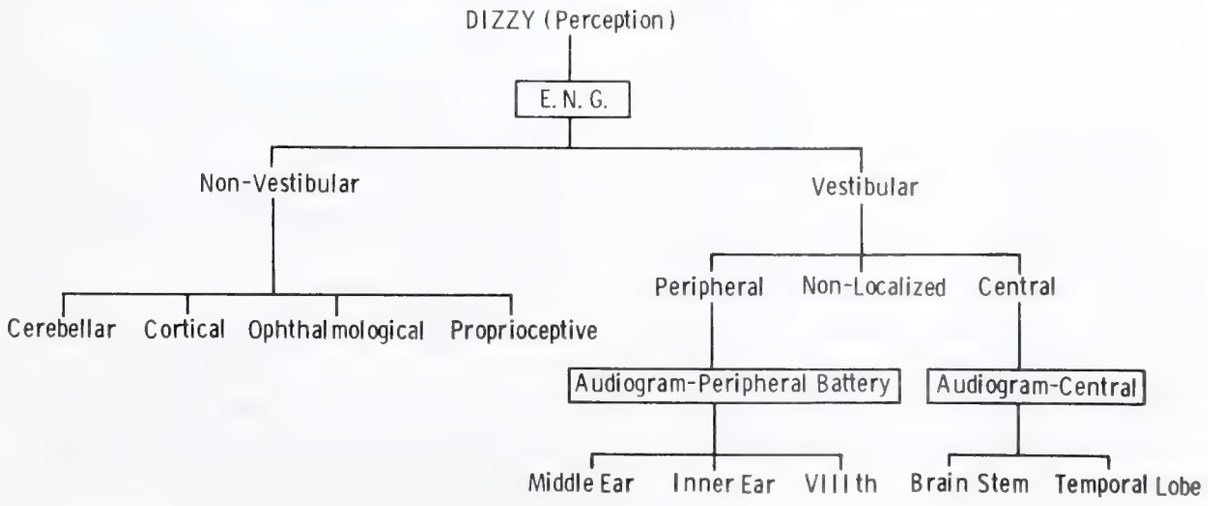
Dr. Neely, Department of Otorhinolaryngology and Communicative Sciences, Baylor College of Medicine, 1200 Moursund, Houston, TX 77030.

11. The flow sheet depicts the current approach to localizing the lesion in the patient with dizziness.



Medical consultation: art, etiquette, ethics

Stanton J. Barron, MD

Medical consultation is considered to be an integral component of quality medical care. The author presents his views on the responsibilities of both the physician requesting the consultation and the consultant. Pitfalls of consultation also are discussed.

Definition

The objective of the physician to render service to humanity with full respect for the dignity of man remains unchanged despite changing times. To fulfill this objective a physician should seek consultation whenever it appears that the quality of medical care may be enhanced.[1]

Consultation is the process by which one physician shares responsibility for the patient's care with another physician or health agency. The purpose of this article is to review the standards by which practitioners have determined the propriety of their conduct through consultation. Many of the principles also apply to referral practices.

Indications

To seek consultation requires maturity and scientific objectivity.[7] Simply stated, a physician should seek consultation upon request in doubtful or difficult cases or whenever it appears that the quality of medical care may be enhanced thereby. In every consultation the benefit to the patient is of first importance.[1] Certainly consultation is indicated when (1) assistance is needed in diagnosis and treatment;[5] (2) there are medical-legal reasons; (3) the patient or family requests consultation;[5] (4) delayed recovery, long-time therapy, or unfavorable prognosis is anticipated;[5] or (5) the attending physician recognizes that he is not a specialist in the field of the patient's illness and believes that a consultant might provide more skilled care. It is well established that good cooperation between physicians and the appropriate use of consultation is reassuring to the family and serves to allay anxiety and should be offered in anticipation of family-patient unrest or dissatisfaction.

Techniques for Requesting Consultation

The timing of consultation is important and, to a large measure, is determined by the working relationship between the physicians involved. To refer a patient reluctantly as a last resort or as an afterthought may leave the consultant with insufficient time, and the patient may view the consultation as something of less importance. Worse, the patient may view this as an admission of despair on the part of the attending physician. Consultation should be requested during ordinary working hours when feasible. The consultant's immediate and understanding response even at inconvenient times shows his respect for the patient and the attending physician. Request for consultation should be formal, utilizing established guidelines of hospital and medical society bylaws and only after preparing the patient and obtaining his permission. Unofficial, casual, curbstone type consultations are to be avoided, as they tend to place both the attending physician and consultant at a disadvantage which often yields a lesser quality of care for the patient. The method and procedure of consultation remains essentially unchanged whether the patient is to be seen in the office or the hospital. While telephone consultations are generally treated less formally and may not involve immediate written com-

munication, for the protection of the patient, attending physician, and consultant, ideally the opinion should be committed to writing at the earliest opportunity and placed in the patient's chart. There are circumstances that make this difficult to fulfill.

In choosing a consultant, the attending physician should use great care. The consultant should be known to be competent in the problem area under consideration and he should be reasonably available to the patient. When possible, continuity of patient care is best served by the consultant who is known to the attending physician and where some professional working relationship has been established. The consultant is often at a disadvantage in working in an uncertain or strange environment where he is not familiar with the laboratory, radiographic, or other support services. Putting it another way, the most available consultant from the attending physician's environment is likely to be the one most attuned to the local facilities and opportunities.

In choosing the consultant, the attending physician should remember that "free choice of physicians is the right of every individual and one which the patient should be free to exercise as he chooses."[1]

With these considerations, it has been recommended that the attending physician suggest three physicians as consultants.[7] Situations may arise where for professional, geographic, economic, or other reasons the attending physician may feel it advisable to designate a specific consultant.

Implementing Consultation

Preparation for the consultation is a responsibility of the attending physician. The physician in charge should provide the consultant with a history of the case together with the physician's opinion and outline of treatment, or as much of this as may be of service to the consultant.[1] The physician in charge also should make available all radiographs and other laboratory data pertinent to the case. This is the most necessary, yet neglected, function of the referring physician.

A positive attitude of the referring physician regarding the necessity of the consultation greatly influences and facilitates its outcome and contribution to patient care.[10] The attending physician should definitely tell the patient that the consultation has been requested, and approximately what he may expect.[7]

It is for the attending physician to specify what service he desires from the consultant. He should inform the consultant whether or not he wishes merely an opinion, consultation and advice, consultation and follow-up orders written as the consultant deems indicated, or a complete transfer of services and responsibilities. The attending physician should specify whether or not the consultant should or should not discuss his findings with the patient or his family.[3] It is for the attending physician to define how far the consultant should go. The consultant should know *why* he is being consulted.[18] The consultant may decline to grant the consultation if the terms or conditions imposed by the attending physician tend to interfere with or impair the exercise of his medical judgement and skill.[1]

Responsibilities of the Consultant

Formerly, consultation was held at a mutually agreed upon place and time, with all physicians in attendance. After the records were reviewed, the patient was visited by one and all. Upon comple-

tion of the patient examination, the physicians retired to the consultation room and mapped out a plan of strategy. Following this the senior attending physician and consultant would return to the patient's room and make a report to the patient and family. This is still a highly desirable method of procedure, but today it is not always convenient and certain modifications of this process are now generally accepted.

Today, location of the consultation is largely determined by the patient's condition and convenience, and the desires of the attending physician and consultant. Ethically, a physician should not dispense his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgement and skill.[1]

Generally accepted rules and attitudes for the attending physician and consultant include: the physician in charge of the case is responsible for treatment of the patient. Consequently, he may prescribe for the patient at any time and is priviledged to vary the treatment outlined and agreed on at a consultation whenever, in his opinion, such a change is warranted. When an emergency occurs during the absence of the physician in charge, a consultant may assume authority until the arrival of the physician in charge, but the consultant's authority should not extend further without the consent of the physician in charge. When a physician has acted as consultant in an illness, he should not become the physician in charge of the illness, except with the consent of the physician who is in charge at the time of the consultation.[1]

The consultant should recognize that the patient is seeing him because the referring physician and others believe the consultant to be unusually qualified.[2] The consultant should make every effort not to undermine the patient's confidence in his family physician. He may see the patient late in the course of the illness and at a time when the diagnosis has become readily apparent. The consultant should remember that earlier the case may have been more difficult to diagnose.[16]

If the consultant must change the diagnosis or treatment, this should be done diplomatically so as to preserve the prestige of the physician in charge.[18] This may be done by indicating to the patient or the family that circumstances have changed to the point that some change of diagnosis or of management is indicated.[16] The consultant should not burden the patient with minor management changes, offering little influence on final outcome, simply to justify his entrance into the case.

The consultant's recommendations to the attending physician should be specific as to diagnosis, therapy, expected outcome, and what to do if the therapy does not work.[5] What is routine to the consultant may be extraordinary to the referring physician. A drug schedule that outlines dosage, frequency and route of administration, desired effects, and possible toxicity should not be offensive. At the same time, the recommendations should be brief or allow for selective reading by indicating the sections of the report which are most vital to the physician and the patient's care. The consultant should state the indications that form the basis for his recommendations and, in unusual cases, give reference to experience with similar cases or to pertinent literature.[18] The opinions of both the physician in charge and the consultant are confidential and must be so regarded by each.

In practice a prompt telephone call satisfies the need of keeping the referring physician informed. A brief written report

should follow the telephone call, and this report should be followed by copies of hospital discharge summary, pathological, laboratory, and x-ray reports. All information which aids the physician should be furnished so that proper treatment or advice can be given without delay. Important specific details are incorporated into a written report which is easier to grasp, is available for reference, and can be preserved.

Informing the Patient and Family

After the consultant has completed his investigations, he and the physician in charge should meet privately to discuss the course to be followed. Statements should not be made nor discussion take place in the presence of the patient, his family, or his friends, unless all physicians concerned are present or unless all of them have consented to another arrangement.[1]

It is frequently difficult or nearly impossible for all physicians involved to be present simultaneously for discussion with the patient, and it is the consent "to another arrangement" that usually occurs. The referring physician should decide whether the consultant delivers a written opinion to the referring physician who, in turn, holds all discussion with the patient and his family, or whether the consultant personally communicates his opinions and recommendations to the patient in the presence of the attending physician. Under the latter condition, the consultant's conduct and choice of words must be especially tactful and dictated with extreme caution to avoid being misunderstood or giving basis for being misquoted.

When the conclusions resulting from the consultation are discussed with the patient and his family, the physicians' attitude, ideally, will be warm and friendly. Opinions are best stated slowly and with sufficient deliberation to show respect of the situation. The discussion should be made using easily understood, nonclinical language. When the prognosis justifies optimism, it would be expressed; but the physician should neither exaggerate nor minimize the gravity of the patient's condition. If the news is bad, he will be careful to avoid leaving behind him a state of hysteria or extreme anxiety for the referring physician to combat.[2] If hope is not rationally possible, what is said must be mutually agreed to by attending physician and consultant.

The withdrawal of the consultant is the final step in the consultation. After the consultant has seen the patient, given his opinion, and rendered necessary care, he is ready to leave the case. This is the time for a friendly word to show that the case is once more the responsibility of the attending physician unless further developments call for his reappearance.

Pitfalls of Consultation

Conflict of Opinion

Should the physician in charge and a consultant be unable to agree in their view of the case, another consultant should be called or the differing consultant should withdraw. However, since the patient employed the consultant to obtain an opinion, the consultant should be permitted to state it to the patient, his relative or personal friend, in the presence of the physician in charge.[1]

Losing the Patient to the Consultant

This occurs when one loses his identity and role as a consultant. Every effort should be made to keep the referring

physician very much in the picture. When the consultation has been completed, the consultant will leave the patient in the hands of the referring physician.[2]

Fragmentation of Patient Care

When a specialist or subspecialist who does not provide general health care assumes the care for a patient's particular condition, a physician who does provide general health care should continue to be involved to avoid neglect of overall care.

Misunderstandings Between Physicians

These can be avoided by remaining scientifically objective, and by giving the patient's interest and welfare first priority at all times.

Medical-Legal Aspects of Consultation

Liability for the attending physician arises when it is shown that he knew or should have known that the patient's condition was beyond his ability to treat and has not so informed the patient. At present, physicians most vulnerable to malpractice suits are those who perform emergency room services for conditions outside their scope of training and experience. Not uncommonly, both specialists and nonspecialists are being required to render such services as an integral part of their hospital staff responsibilities. In such situations, a workable solution is to rely heavily on the specialist to provide backup service in difficult cases. The backup service may be supportive and confirmatory of the attending physician's judgment, or it may be a more active form of assistance.

Medicolegal risks can be avoided by (1) convincing the patient of the conscientious attention and concern of both his original doctor and the consultant; (2) obtaining all of the facts of the case from the primary physician's office and hospital records before examining the patient; (3) being objective and honest—never critical—and choosing words with utmost care in explaining the clinical facts in all stages of patient care; (4) including the family in the discussion and holding the conference as soon as possible (unwarranted delays can give rise to an air of confusion and uncertainty which increases apprehension, misunderstanding and distrust); (5) involving the referring doctor in continuing care; and (6) when taking responsibility for a patient who has been treated by another doctor, avoiding criticism of the previous physician. We must not cover up gross incompetence, but such complaints should be made to the medical society's board of censors, not to the patient or his family.[3]

Consultant Fees

When patients are seen in consultation or are referred by one physician to another, it is unethical for either physician to offer or to receive any inducement other than the quality of professional services. Included among unethical inducements are split fees, rebates, kickbacks, discounts, loans, favors, gifts, and emoluments with or without the knowledge of the patient. Fee splitting violates the patient's trust that his physician will not exploit his dependence upon him, and invites physicians to place the desire for profit above the opportunity to render appropriate medical service. Combined billing by physicians may jeopardize the doctor-patient relationship by limiting the opportunity for understanding of financial arrangement between patient and individual physician.[1]

Summary

Consultation or referral is a valuable and sometimes necessary part of ethical and competent medical practice. Care by both primary physician and consultant to preserve the professional relationship enhances the quality of medical care received by the patient. There are pitfalls to consultation. These pitfalls can be avoided by being constantly mindful of the patient's welfare and family needs, by constantly maintaining an attitude of mutual respect between attending physician and consultant, and by following established procedures of ethical and professional conduct.

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Dr. Barron, 1101 N 19th, Abilene, TX 79601.

Determining patency of a Roux-en-Y limb after choledochojejunostomy

Choledochojejunostomy, using a Roux-en-Y anastomosis, has been a useful procedure in selected cases of obstructive jaundice. However, patency of the Roux-en-Y limb is difficult or impossible to determine in the postoperative period. Use of meglumine iodipamide (Cholografin) is not satisfactory for visualizing the biliary tract in the jaundiced patient. Patency may be inferred, however, by visualizing rose bengal I 131 in the intestine. We have not found any report which shows visualization of the Roux-en-Y limb in jaundiced patients by any diagnostic method.

This article deals with the use of rose bengal I 131 in three jaundiced patients to demonstrate the patency and integrity of the Roux-en-Y limb after a biliary drainage procedure.

Choledochojejunostomy has been an effective procedure in selected cases of biliary duct obstruction. It has been successfully employed in patients with stricture of the common duct. Obstructing lesions in the common bile duct or common hepatic duct may be resected or bypassed by anastomosing the dilated proximal duct system to a jejunal segment, preferably by using a Roux-en-Y jejunal limb.[1] With successful biliary drainage, cure or satisfactory palliation may follow.

Patients presenting with obstructing lesions of the extrahepatic bile ducts usually are jaundiced and have extremely high levels of serum bilirubin. Postoperatively, these patients remain jaundiced until bile drainage is established through the Roux-en-Y jejunal segment.

Patency of the Roux-en-Y limb is difficult or impossible to determine during the postoperative period. Use of meglumine iodipamide (Cholografin) to visualize the biliary tract in the jaundiced patient is unsatisfactory. Patency may be inferred by the visualization of rose bengal I 131 in the intestine. We have been unable to find previous reports which show visualization of the Roux-en-Y limb in jaundiced patients by any diagnostic method.

This article deals with the use of rose bengal I 131 in three jaundiced patients to demonstrate the patency and integrity of the Roux-en-Y limb following a biliary-enteric anastomosis for relief of jaundice.

Case Reports

Case 1: A 69-year-old man was hospitalized because of jaundice, light stools, pruritus, and a weight loss of 9.1 kg (20 lb). Eight weeks earlier he had been admitted because of pruritus and mild jaundice. At that time, liver function was abnormal. Tests showed elevated levels of alkaline phosphatase, lactic dehydrogenase, and bilirubin. Barium enema examination showed diverticulosis and cholelithiasis. A cholecystectomy was performed. At operative cholangiography, the hepatic and common ducts were visualized. The common duct was not dilated. Contrast material was demonstrated in the duodenum. The intrahepatic ducts were not well visualized. The common duct was not explored.

Although the postoperative course was without complications, the patient remained jaundiced. By the time of the second admission, the degree of jaundice had increased. Stools were intermittently brown. The patient continued to lose weight.

Laboratory studies revealed the follow-

From the Departments of Surgery and Nuclear Medicine, St. Paul Hospital, Dallas, TX.

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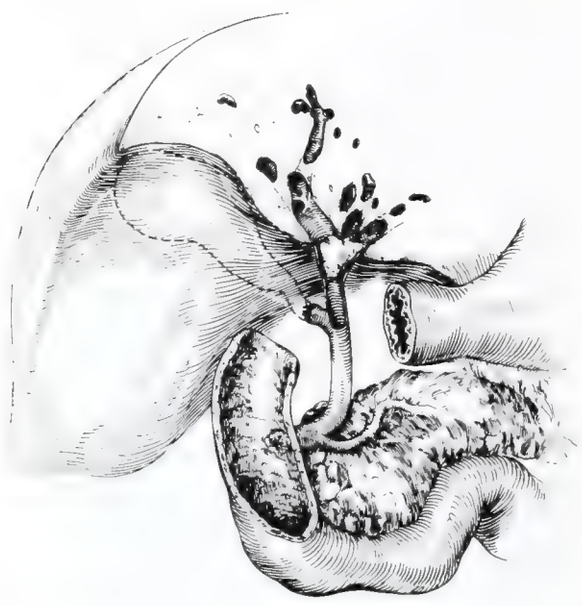
Thomas M. Aycock, MD;
Guillermo Dammert, MD;
Ronald F. Garvey, MD;
Robert W. McConnell, MD;
Ernest Poulos, MD

ing values: serum glutamic oxaloacetic transaminase (SGOT), 160 IU; alkaline phosphatase, >350 IU; cholesterol, 490 mg/100 ml; hemoglobin, 14 gm/100 ml; hematocrit reading, 46 volumes %; white blood cell count, 7,000/cu mm; total bilirubin, 13.9 mg/100 ml; direct bilirubin, 8.6 mg/100 ml. A VDRL test was nonreactive. A liver biopsy demonstrated cholangiohepatitis, consistent with obstruction.

The transhepatic cholangiogram showed partial obstruction of the left and right intrahepatic ducts at the hilum (Fig 1). At surgery, resection of common hepatic duct bifurcation was performed. The hepatic ducts were sutured to form a common channel, then a cholangiojejunostomy using a Roux-en-Y limb was performed (Figs 2-4). Pathologic examination of the specimen showed infiltration of a poorly differentiated adenocarcinoma at the margin of the resection.

Postoperatively, the jaundice remained. Large quantities of bile-colored material drained from the operative site. On the 17th postoperative day, 250 microcuries of rose bengal I 131 were given intravenously. This study demonstrated excretion of radionuclides into the bowel, indicating a patent surgical anastomosis. The bilirubin level at this time was 10 mg/

1. Transhepatic cholangiogram. Note the obstruction at the bifurcation of intrahepatic bile ducts. Biliary ducts are dilated above the obstruction.



2. Drawing shows site of obstructing tumor.

100 ml. Some retention suggested some intrahepatic duct obstruction (Fig 6).

The patient improved progressively. The total bilirubin value dropped below 3 mg/100 ml on the 29th postoperative day, and a repeat rose bengal I 131 study was performed. The scan was normal (Fig 7).

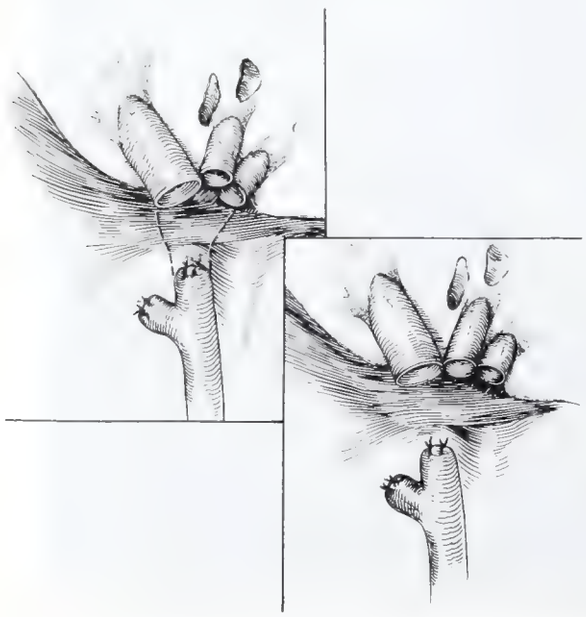
Good palliation has been achieved, and the patient is free from pruritus and jaundice.

Case 2: A 58-year-old white woman was admitted with a five-day history of jaundice, pruritus, and alcoholic stools. There was no history of transfusion, anemia, or alcoholism. Previous surgery included a vaginal hysterectomy and a cholecystectomy.

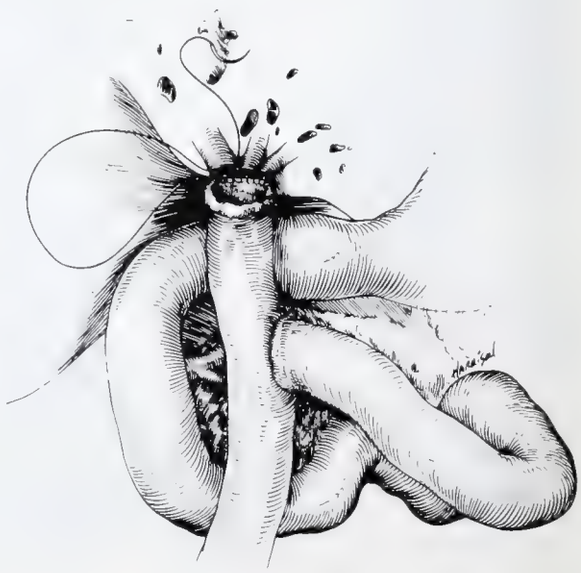
Other than jaundice, the physical findings included a tender liver, palpable 5 cm below the right costal margin.

Laboratory data included: cholesterol, 340 mg/100 ml; total bilirubin, 10.4 mg/100 ml; alkaline phosphatase, 300 (30-85) IU/ml; SGOT, 95 IU/ml; hepa-

3. Three hepatic ducts are sutured together to form a common channel.



4. Cholangiojejunostomy, using Roux-en-Y limb, is shown.



titis-associated antigen, negative.

An exploratory laparotomy revealed adenocarcinoma of the right ovary with metastases to nodes at the liver hilus. The involved nodes had produced biliary obstruction. Bilateral oophorectomy and choledochojejunostomy with a Roux-en-Y limb was performed.

The postoperative course was uncomplicated, although the patient remained jaundiced.

A scan with rose bengal I 131 showed normal transit of radionuclide to the bowel, suggesting no obstruction at the hepatic portal.

Case 3: A 68-year-old white woman was admitted with chills, fever, and abdominal pain of one month's duration. She had experienced loss of appetite and weight loss. Previous surgery included cholecystectomy 40 years earlier and resection for carcinoma of the colon 11 years earlier.

Laboratory studies revealed elevated levels of alkaline phosphatase and SGOT. An intravenous cholangiogram showed massive dilation of the common bile duct, possibly with retained stones from previous gallbladder surgery.

At surgery the following were performed: adhesion lysis, exploration of common

5. Preoperative scan. Rose bengal I 131 scan reveals no excretion of the radioactive material into the bowel, suggesting complete, or a high degree of, biliary obstruction.

bile duct, operative cholangiogram, resection of cystic duct stump, and choledochojejunostomy for stenosis of Oddi's sphincter. During exploration, a retroperitoneal mass was found. Biopsy examination revealed lymphocarcinoma. Operative cholangiogram showed extreme ectasia of the extrabiliary duct system and the left intrahepatic duct system.

Postoperatively the patient continued to spike temperatures to 38.3-38.9 C (101-102 F) daily. Results of liver function tests did not change, and the jaundice remained. A rose bengal I 131 liver-spleen scan showed radioactive material in the liver with excretion into the Roux-en-Y loop, thus demonstrating patency of the Roux-en-Y loop with adequate decompression.

Comment

Rose bengal I 131 is generally used for evaluation of jaundiced patients during the preoperative period. It is administered intravenously, cleared from the blood by hepatic parenchymal cells, and excreted through the biliary tree into the intestinal tract. A high degree of diagnostic accuracy can be achieved.[2,3]

After bypass operation for neoplastic biliary tract obstruction, visualization of a patent anastomosis may be helpful. The integrity of the biliary-enteric anastomosis may be questionable when the patient remains jaundiced and when there is a large amount of bile drainage from drain sites. Using rose bengal I 131, visualization of the Roux-en-Y limb has been demonstrated postoperatively in three jaundiced patients.

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Dr. Aycock, 2300 W Michigan, Midland, TX 79701.

Dr. Dammert, Fellow in Pediatric Surgery, Toronto, Childrens Hospital, Canada.

Dr. Garvey, Chief of Surgery; Dr. McConnell, Director, Department of Nuclear Medicine; Dr. Poulos, Director of Surgical Education, St. Paul Hospital, Dallas, TX 75235.

6. Postoperative scan, 17th day. Although the patient remained jaundiced (bilirubin, 10 mg/100 ml), excretion of radionuclides into the bowel indicates a patent surgical anastomosis, and the Roux-en-Y limb is visualized.

7. Postoperative scan, 29 days. Normal scan (bilirubin, 2 mg/100 ml).

Actinomycotic mycetoma treated with minocycline: case report

W. R. Hubler, Jr., MD; W. R. Hubler, MD

Mycetoma is a syndrome of indolent cutaneous, subcutaneous, fascial, and osseous lesions that develop following the traumatic introduction of diverse infectious organisms. Etiologic agents are generally subdivided into true fungi (eumycotic mycetoma) and bacteria (actinomycotic mycetoma); both groups of organisms are saprophytic inhabitants of vegetable debris in soil and create pathologic lesions when introduced into skin, usually on the foot (Madura foot). Lesions are characterized by chronic suppurative abscesses and sinuses from which drains creamy fluid studded with minute microcolonies (grains) of the causative organism.

Most cases of mycetoma originate in rural, tropical regions allowing for both proliferation of the organism in soil and inoculation of the agent into the feet of unshod workers. Mycetoma is rare in the United States, but is more prevalent in the South than in the North. This article details a case of actinomycotic mycetoma in South Texas, and reviews the current concepts of the etiology, evolution, and treatment of mycetoma.

Case Report

A 35-year-old Mexican-American man sought medical attention for a painful, distorted left foot. The pathologic lesion began 14 years earlier as a small, purple nodule which frequently drained pus. There was no antecedent injury known and the lesion was asymptomatic. During the ensuing years, the lesions gradually multiplied and spread to involve most of the left sole with dark purple suppurating nodules. About one year before presentation, the foot became spontaneously painful, tender, and distorted. No systemic symptoms existed at any time. The patient was of Mexican ancestry but had never traveled outside Texas. He was a physical laborer

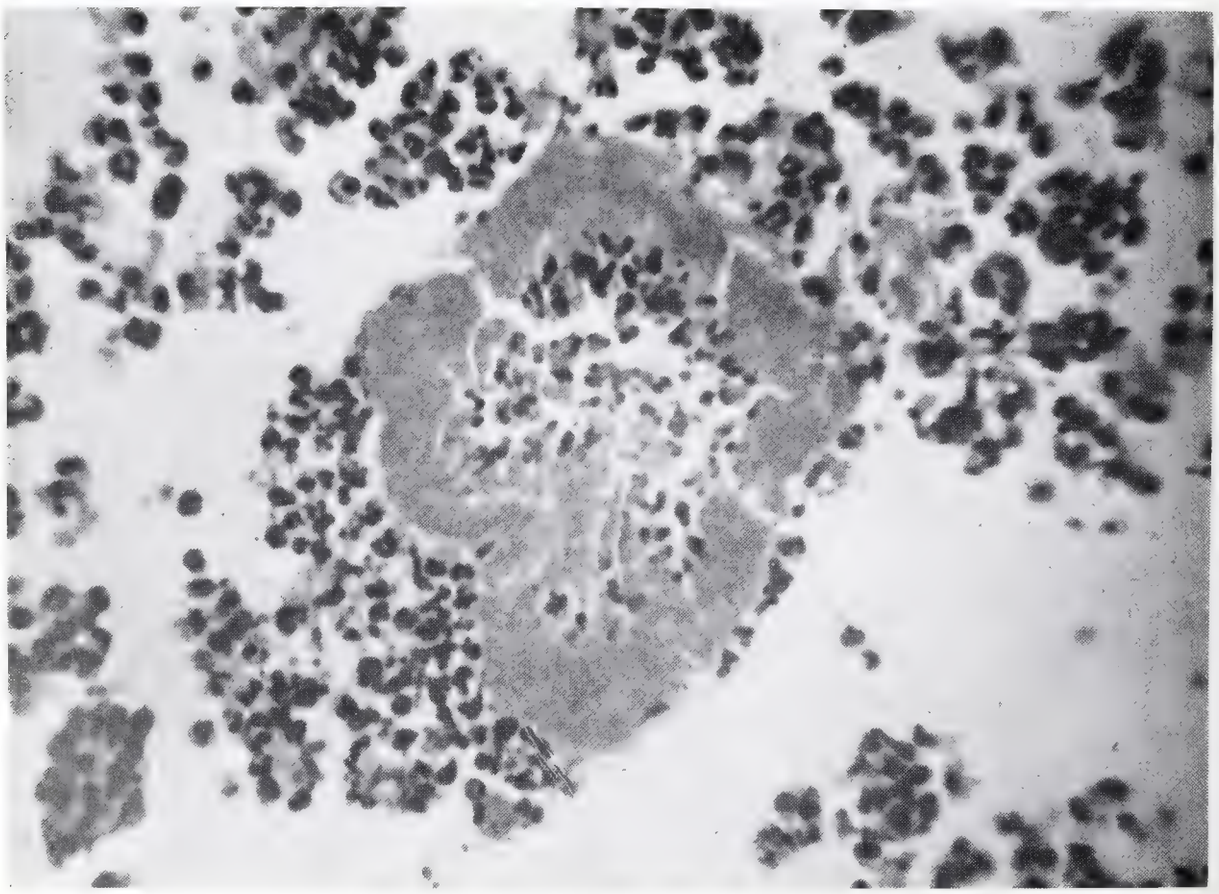
1. Dark purple tumefactions which spontaneously drained creamy fluid distorted the plantar instep in this case of actinomycotic mycetoma.

and, when the initial lesion developed, was picking cotton and frequently going barefoot.

Physical examination revealed an edematous left foot and ankle with a grotesque group of discrete, deep purple to black nodules studding the left instep (Fig 1). Several nodules were spontaneously suppurating a creamy serosanguineous fluid permeated with barely discernible white particles. There was no lymphadenopathy or fever. Microscopic examination of the particles showed myriads of gram-positive, intertwining filaments with interdispersed cocci forming islands of microcolonies in an amorphous exudate (Fig 2). Culture on brain-heart infusion medium and Sabouraud's glucose agar incubated aerobically at 37 C for two weeks produced a white, waxy, wrinkled colony typical of *Actinomyces* or *Nocardia* species. The Communicable Disease Center (Atlanta) identified a culture isolate as *Actinomadura madurae*.

Roentgenograms of the involved foot and ankle revealed only minimal osteoporosis in the area of the lesion. Routine laboratory values—complete blood count, blood urea nitrogen, and urinalysis—were within normal limits. Treatment was begun with diaminodiphenylsulfone (DDS), but subsequent moderate leukopenia (4,000 WBC/cu mm) forced discontinuance of the drug after three

2. Filamentous grains were present in the suppurative material and gram's stain and culture were typical of Actinomadura madurae. *(38X)*



weeks. Therapy with minocycline, 150 mg twice daily, was initiated and clinical improvement was noted after six weeks. Six months after minocycline therapy began, the lesions were reduced in size and rarely suppurated, the pain and tenderness had resolved, and the patient was able to work.

Comment

First described as Madura foot in Madura, India, in 1842,[1] mycetoma is now recognized worldwide. Unfortunately, medical literature has become replete with confusing synonyms for the disease. Since the clinical picture is similar and, therefore, cultural identification of the etiologic agent is the essential diagnostic feature, the encompassing nosologic term, mycetoma, is preferable.

The disease is endemic in Central Africa, India, Mexico, and the Mediterranean crescent, and although the causative organism often parallels the geographic area, most of the incriminated agents have a worldwide distribution. The most important factors in areas of prevalence are climatic and socioeconomic; all organisms which produce mycetoma depend upon a warm, humid environment with adequate nutrient vegetable debris, and the organisms produce disease only when traumatically introduced into susceptible tissue such as the foot. Mycetoma is a disease primarily of adult males, and probably is related to occupational exposure rather than to selective susceptibility.

After a period of quiescence in the tissue, the organism evokes an indolent inflammatory reaction which clinically appears as an exuberant cutaneous nodule or a small, deep, subcutaneous swelling. As the organism proliferates, it slowly invades along fascial planes or into the underlying bone, and burrows toward the skin surface to produce a chronically draining sinus. Usually, 6 to 12 such lesions mark a superficial diadem of a widespread, locally invasive subcutaneous infection. The lesions frequently become discolored and produce fibrous degeneration. However, the infected foot remains painless and functional. During the years of progression and remissions, the cutaneous, fascial and osseous destruction finally induces distortion and pain and usually the prospect of disability prompts the patient to seek medical attention. Hematogenous dissemination, pulmonitis, meningitis, and direct visceral invasion are rare life-threatening sequelae of mycetoma.[2-4]

Species differences in proteolytic enzyme production may explain the selective aggressiveness of these diverse soil saprophytes. In experimental animal infections, Rippon and Peck[5] have found that collagenase is the essential fungal and bacterial product that allows the destructive encroachment of the organisms in mycetoma.

Identification of the causative organism is essential for diagnosis, prognosis, and therapy. Bacterial-induced mycetomas (actinomycotic mycetomas) and fungal-induced mycetomas (eumycotic mycetomas) share a confusing taxonomic classification. Fig 3 is a current list of common organisms which cause mycetoma. All agents listed produce a single, similar clinical entity. The most common organisms causing mycetoma in Mexico are *Nocardia brasiliensis, Actinomadura madurae* and *Allescheria boydii;* the latter is the most common agent in the United States.[1] Mycetoma is a rare disease in the US, with fewer than 75 cases reported by 1971[7] as compared to 1,231 cases in 2½ years in Sudan.[8]

Examination of the grains in the exudate allows fast, easy preliminary diagnosis and classification. The color of grains is variable and of limited diagnostic value. Generally, black grains are produced by true fungi, red grains by *Streptomyces pelletierri,* and creamy yellow grains by both bacteria and fungi (Fig 3). Staining and microscopic examination allows better evaluation. Actinomycetes produce gram-positive cocci and intertwined filaments of 0.5-1 μ diameter, often with peripheral clubbing, embedded in a gram-negative matrix. Eumycotic grains are composed of broad (2-5 μ) jumbled mycelia which may have peripheral hyphal swellings (chlamydospores). Collection of grains is facilitated by gentle abrasion of draining lesions or overnight occlusion of the lesions with sterile gauze saturated with physiologic saline solution.

Culture of either homogenized tissue, aspirated exudate, or saline-washed grains is diagnostic. Actinomycetes grow in two or three weeks on brain-heart infusion medium or blood agar, and all cultures should be incubated aerobically and anaerobically at 37 C. An efficient 5-10% carbon dioxide anaerobic system is essential for several *Actinomyces* species.[1] True fungi grow in three to eight weeks on Sabouraud's dextrose agar (without cyclohexamide) incubated at 37 C. Interpretation of cultural colonies depends on morphology, spores, histochemistry, and enzymology, and is best achieved by experienced mycologists.

Histologic study of tissue often reveals a sinus tract containing grains and nonspecific inflammation, but is not a diagnostic substitute for culture study. Immunologic studies are not yet established, but investigations[1,9] of serum complement-fixing antibodies, precipitin and agglutinin tests, and skin tests with *Nocardia* antigens indicate some usefulness in diagnosis when culture is negative or not available. Roentgenograms of the involved extremity often show destructive and proliferative lesions of the small bones with necrosis, osteoporosis, punched-out lysis, and osteal hypertrophy.

Actinomadura madurae is a common cause of mycetoma in Mexico, and cases

3. Common causative organisms of human mycetoma.

Organism	Grain Color	Prevalent Region
Actinomycotic mycetoma:		
Actinomadura madurae	White-Yellow-Pink	Mexico, Africa
Actinomadura (Streptomyces) pelletierii	Red	Africa, South America, USA
Actinomyces israelii	White-Yellow	USA
Nocardia brasiliensis	White	Mexico, Central & South America
Nocardia asteroides	White	USA, Lebanon
Streptomyces somaliensis	Yellow-Brown	Africa
Eumycotic mycetoma:		
Allescheria boydii	White	USA, Europe, Africa
Madurella grisea	Black	USA, South America
Madurella mycetomi	Black	Africa, Europe
Phialophora jeanselmi	Black	USA, Europe
Cephalosporium falciforme (Acremonium kiliense)	White	USA, Puerto Rico, South America

from *A madurae* in South Texas are not surprising. Osseous and muscle involvement is frequent and proteolytic enzymes demonstrated *in vivo* may explain the organism's aggressiveness.[1]

Treatment of both actinomycotic and eumycotic mycetoma often ultimately is surgical, but medical management is the best initial approach, especially with actinomycotic mycetoma. Antibiotic therapy for actinomycotic mycetoma is relatively effective, especially with penicillins and sulfas.[2] Sulfadiazine and DDS have been used, especially in *Nocardia brasiliensis* infections.[10] Recently, trimethoprim-sulfamethoxazole (Septra, Bactrim) has been efficacious in selected actinomycotic mycetomas.[11] Abbott[8] has treated many cases of *A madurae* mycetoma with broad-spectrum antibiotics, especially streptomycin. In our case, improvement was achieved with minocycline, a broad-spectrum antibiotic. Reduced penetration of antibiotics into fibrotic and cystic areas requires high-dose long-term medical systemic therapy. Eumycotic mycetomas are notoriously resistant to chemotherapy, but thiabendazole,[12] (Mintezol), DDS,[13] and 5-flucytosine (Ancobon) may offer initial therapeutic trials. Limited debridement or excision of nodules in an attempt to maintain function of the extremity, and even palliative wide excisions, should be tried before amputation is done.

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Drs. Hubler and Hubler, 1510 South Brownlee, Corpus Christi, Texas 78404.

Treatment of myasthenia gravis ptosis and extraocular muscle palsies

Frank G. Anderson, Jr., MD

The majority of myasthenia gravis patients experience ptosis or extraocular muscle palsies in the presenting or later phases of the disease.[1] The related diplopia, blur, and cosmetic effect contribute to patient morbidity. For appropriate cases, corticosteroid therapy[2] and muscle surgery[3,4] are useful supplements or alternatives to the often unsatisfactory effects of anticholinesterase medication, prisms, and lid crutches.

Three cases are presented which demonstrate salient points concerning the treatment of the ocular aspects of myasthenia gravis.

Case Reports

Case 1: In November 1966, a 51-year-old white woman was seen; she had had a variable degree of ptosis of the left upper eyelid for one month. Edrophonium chloride (Tensilon), 1 ml intravenously, resulted in prompt elevation of the eyelid. Neostigmine bromide (Prostigmin) was prescribed. Two weeks later, ptosis of each upper eyelid was present. The medication was increased to 75 mg four times a day, but gave the patient no appreciable benefit. In April 1967, lid crutches were attached to the patient's glasses frames. These also provided inconsistent lid elevation and secondary visual improvement. Subsequently, the patient experienced severe respiratory insufficiency. A change of medication from neostigmine bromide to pyridostigmine bromide (Mestinon) controlled the respiratory symptoms but did not alleviate the lid symptoms. On May 28, 1968, the patient underwent bilateral resection, 10 mm, of the levator palpebrae superioris by the conjunctival approach. For seven years, ocular and general symptoms have been controlled. The patient continues to be maintained on long-acting pyridostigmine bromide, 900 mg twice a day.

Case 2: In November 1970, a 70-year-old white man was referred because of six-month history of ptosis of the left upper eyelid. Generally, symptoms became more noticeable as the day progressed. Examination revealed bilateral ptosis, with the left upper eyelid more involved. Results of diagnostic test with edrophonium chloride were positive. Subsequently, the patient's symptoms were controlled for four years with neostigmine bromide.

In December 1974, ptosis recurred in the right upper eyelid. Complete palsy of the left lateral rectus muscle also was present, but diplopia was prevented by the occluding effect of the ptosis. Neostigmine bromide was increased to 60 mg four times a day.

A month later, the presenting signs were unchanged and grade 2 weakness of upward gaze, right eye, was noted. A regimen of prednisone, 30 mg daily for four days, followed by 20 mg daily, was instituted.

A week later the ptosis improved, but the ocular rotations were unchanged. The following week, the lateral rectus weakness had decreased to grade 2, and the upward gaze deficit was minimal. At this visit, it was learned that the patient had, independently, reduced the dosage of neostigmine bromide to 30 mg four times a day because the eye signs were improved and anticholinesterase gastrointestinal hypermotility had been noted.

The next month, the lateral rectus palsy was completely cleared. Subsequently, the patient's symptoms have been controlled with long-acting pyridostigmine,

180 mg twice a day, and prednisone, 10 mg daily or 20 mg every other day.

Case 3: In February 1973, a 10-year-old black girl was seen because of bilateral ptosis of four months' duration. During the same period, intermittent diplopia had been noted. The child also had a history of idiopathic seizures from ages 3 to 7 years. Since the latter age, the seizures had been controlled with phenobarbital, 60 mg daily.

In March 1973, bilateral ptosis of the upper eyelids and bilateral grade 3 to 4 paresis of eye movement in all directions were present. A test with edrophonium chloride was positive for myasthenia gravis. Additionally, there was slight weakness of the dorsal neck muscles, deltoid, triceps, and distal muscles of the upper and lower extremities. Slight mediastinal widening was noted on roentgenogram of the chest.

A regimen of pyridostigmine bromide in divided doses, totaling as much as 820 mg daily, was prescribed. Only a temporary decrease in the ptosis and extrinsic eye muscle palsies were noted. A three-month course treatment with prednisone, 20 to 30 mg daily, did not affect the findings. In spite of the extent of the extraocular muscle palsies, only infrequent diplopia continued to be noted. The patient has not complained of blur secondary to the ptosis.

Discussion

Anticholinesterase therapy frequently controls nonocular evidence of myasthenia gravis, but less often aids related levator palpebrae superioris and extraocular muscle palsies.[5] The three cases reported did not show enduring improvement of ocular signs with this therapy.

Corticosteroid therapy has been found to control the general[6] and ocular[2] signs of the disease. The ocular signs may begin to improve in a few days, but as long as three months may be required for a positive effect. A maintenance dose of prednisone, 15 or 20 mg every other day or the equivalent daily dosage, is the aim for long-term control.[7]

Lid crutches attached to spectacle frames are helpful, to variable degrees, in controlling ptosis. Many patients who wear lid crutches are subject to eye exposure symptoms.[5] At present, the efficacy of placing a magnet in or on the upper lid, with attraction of the lid toward the upper part of the glasses frames, appears to be inconclusive. The internal magnets have been associated with lid atrophy and positioning problems, while skin adhesion requirements associated with frequent external application have not been completely worked out. The practice on the part of some patients to tape up the upper lid is to be discouraged, because serious corneal exposure problems may result.[7] Some degree of corrective surgery for ptosis may be helpful in decreasing blur and improving cosmetic appearance.[3,4] A 10 to 12 mm levator resection usually is sufficient to elevate the lid for visual improvement without risking overcorrection.

Not all extraocular muscle palsies that are unresponsive to systemic therapy need local treatment. Among the cases presented, the child with essentially total external ophthalmoplegias but infrequent diplopia is an example. A primarily unilateral ptosis, as demonstrated in case 2, also may act as a patch, thereby eliminating diplopia secondary to extraocular muscle palsy.

Prisms may help to reduce the diplopia associated with more consistent muscle palsies. Fresnel prisms may be applied

temporarily, if not for longer periods of time.[2] They also are useful in determining the amount of prism that may be incorporated into lenses, and can aid in determining whether surgery is a reasonable option. A good response to Fresnel prisms suggests a similar response to extraocular muscle surgery,[8] but in practice this surgery is performed rarely because of the variability of strabismus in most of these patients.

Eye signs alone are not regarded as an indication for thymectomy. These signs may ameliorate after such surgery, particularly in cases of recent onset.[9]

Although cases of myasthenia gravis may appear to be only ocular in nature, some may progress to life-threatening involvement. Case 1 demonstrates such a progression with regard to respiratory insufficiency. Physicians involved in the management of the disease should remain aware of such possibilities.

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Dr. Anderson, 2026 Texas Avenue,
Bryan, TX 77801.

Follow-up of minority premedical students attending summer enrichment programs in a medical setting

John G. Bruhn, PhD; Raymond G. Fuentes, Jr.;
Fernando M. Trevino, MPH; Lafayette B. Williams, Jr., MD

In 1962 Howard University School of Medicine implemented one of the first reinforcement and enrichment programs to identify, motivate, recruit, admit and retain premedical and medical students from minority or disadvantaged backgrounds, or both.[1] At that time about 800 blacks and Mexican-Americans were enrolled in all US medical schools; the majority of black medical students attending Howard University School of Medicine and Meharry Medical College. Following the challenge from Howard University, numerous other US colleges and medical schools initiated summer reinforcement, enrichment, and work-study programs for minority premedical students. Although there is much descriptive and empirical data documenting their success, few of these programs have followed students to document their success or failure in gaining admission to medical school. The number of blacks and Mexican-Americans enrolled in US medical schools in 1974-1975 has increased to 4,000.[2] However, the extent to which enrichment and reinforcement programs have contributed to this increase is unknown. This article presents data regarding the career outcomes of premedical minority students who participated in summer enrichment programs over a period of six years at The University of Texas Medical Branch at Galveston.

Background

A nine-week summer program, designed to encourage black college students to complete their professional education in a health field, was implemented at The University of Texas Medical Branch at Galveston in 1970. The goals and content of the program and the criteria for selecting students have been described elsewhere.[3] The program was limited to Texas residents, but included students from Texas attending out-of-state colleges. Due to limited stipend monies, the program was limited each year to a maximum of 22 students. Several changes were made in the goals and content of the program and in the selection of applicants after the first two years. The program was shortened to an eight-week, and more recently to a four-week, experience, and the major goal of the program was altered from one to motivate and interest minority students in health careers to one of familiarizing minority students interested in medicine with the environment of a medical center through a series of minicourses and practical experiences. Experiences in test-taking were offered in all programs; however, in the past two years more emphasis has been given to enhancing students' note taking, test taking, reading, and memorization skills. Mexican-American students were included in the program after the first two years, and cooperative working relationships with premedical advisers were expanded to 13 schools, especially those with large black and Mexican-American enrollments. This led to an increase in the number of applicants, and only those students with academic promise were admitted. The program was also limited primarily to sophomore premedical students, whereas in the early years premeds at any level were admitted. In the past two years personal interviews were conducted, using the same format and questions that are used by the admissions committee with students who were screened from the larger applicant pool. A maximum of 22 students were, in turn, selected and invited to attend

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1. Characteristics of minority students attending UTMB summer enrichment program, 1970-1975.

No. Participants	
1970	14
1971	19
1972	21
1973	22
1974	22
1975	14
Total	112

Sex Distribution	
Male	60
Female	52
Total	112

Ethnic Distribution	
Black	60
Mexican-American	51
American Indian	1
Total	112

Number of Participants by School	
Pan American University	14
Prairie View A&M University	14
University of Texas at Austin	14
Texas Southern University	13
Texas Southmost College	10
Bishop College	9
Texas A&I University	9
Wiley College	8
Huston-Tillotson College	6
Laredo Junior College	5
Morehouse College	1
Baylor University	1
Southern Methodist University	1
Rice University	1
Massachusetts Institute of Technology	1
College of the Mainland	1
Texas Women's University	1
University of Houston	1
St. Edward's University	1
California State at Los Angeles	1

the summer program. The majority of students were college sophomores. Of the 20 schools represented, all but three were in Texas.

Methods

Fig 1 shows the distribution of students who participated in summer programs from 1970 through 1975 with respect to selected characteristics; 112 students participated in these programs during six years. The distribution of males and females and of blacks and Mexican-Americans is quite similar.

Questionnaires were mailed to the students about one year after they attended a summer program to obtain their retrospective assessment of the meaningfulness of the program to them and their current career plans. Information was obtained from parents or college advisers about students who did not return questionnaires. Thereafter, we inquired about students' current activities at yearly intervals. Many students corresponded with the authors at various points in their careers, asking for advice or attesting to the personal significance of their summer experience.

Results

Fig 2 shows the current career activities of students who have participated in our summer programs. Thirty-nine percent of the students are still completing their premedical requirements, but are planning to apply to medical school within the next two years. Of 31 students who have completed the necessary requirements and applied to medical school, 26 or 83% have been admitted; one student subsequently dropped out because of personal and family reasons. Twenty of the 25 students currently in medical school are attending Texas

schools. The 10 students attending other health professional schools are all enrolled in Texas schools. It is noteworthy that 81% of all students who have attended our summer programs are studying or working in some area of the health professions, and an additional 5% are pursuing graduate degrees in nonhealth areas. Therefore, our summer programs can be termed successful in maintaining or reinforcing college students' interest in the health field. There are few published reports with which to compare our results. Fisk University reports that 55% of the 135 freshman and sophomore students interested in health careers who attended their 1971-1972 summer institute have entered medical, dental, or graduate schools. Numerous other reports indicate that undergraduate minority students can enhance their preparation for application to medical school by participating in summer enrichment programs.[5-7] Data regarding the eventual career outcomes of summer program participants are, as yet, largely descriptive. There is some evidence, however, that the advent of summer enrichment, reinforcement, and work-study programs have helped increase the number of black and Mexican-American students applying for admission to health professional schools. The number of blacks and Mexican-Americans still continues to comprise a very small minority of health career aspirants, with the model physician aspirant being a white male Protestant from an affluent background with a high degree of self-confidence and high academic achievment.[8]

It is difficult to evaluate the impact of a summer experience on the students and on the medical school, and on those faculty who participate in it. Doubtlessly the only criterion of success or effectiveness does not lie solely in the number of minority

2. Current activities of minority students who attended UTMB summer programs, 1970-1975.

Activity	No.	%
Medicine:		
Currently attending medical school	25	25
Currently completing premed requirements and planning to apply to medical school	39	39
Subtotal	64	63
Other Health Professions:		
Currently attending dental, public health, pharmacy, nursing, or allied health schools	10	10
Subtotal	10	10
Health-Related Employment:		
Currently employed full-time (eg, medical technician, research in medical setting)	8	8
Subtotal	8	8
Others:		
Employed in nonhealth field	14	14
Attending graduate school	5	5
Subtotal	19	19
Total number of students for whom information is available	101*	100

*Information was available for 101 of the 112 students. Six students could not be located during followup, four attended summer programs twice, and one student is deceased.

students who gain admission to a medical school. The dialogue and interaction between students and faculty from different cultural and social experiences effects attitudinal and behavioral changes whereby both the students and faculty emerge more helpful to each other.

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Dr. Bruhn, Associate Dean of Medicine and Coordinator of Community Affairs; Mr. Fuentes, Coordinator of Special Programs; Mr. Trevino, Co-Coordinator of Special Programs; Dr. Williams, Assistant Professor of Psychiatry, The University of Texas Medical Branch, Galveston, TX 77550.

Profile: Texas' doctor-congressman

For the first time since 1887, when Dr. James Webb Throckmorton completed his service in the U S House of Representatives, Texas is represented in Congress by a physician—Dr. Ron Paul.

The Lake Jackson obstetrician-gynecologist won his District 22 seat in a special election runoff in early April. Republican Paul succeeds Democrat Bob Casey who had served the district since its formation in 1958. (Casey resigned last January to accept a position on the Federal Maritime Commission.)

What would prompt a physician with a thriving practice to enter the political arena?

Dr. Paul was quick to state his reasons, "... concern for the direction in which the country is headed ... the economy ... inflation. There are some serious times ahead, and the system is threatened."

Although the Duke University School of

Dr. Paul (right) greets Texas doctors, Dr. George Alexander of Houston and Dr. Joe Nelson of Weatherford, on a visit to Washington.

Medicine graduate is a newcomer to politics, he has long been active in his community. He is past president of the Lake Jackson Kiwanis, the Brazoria County Cancer Society, and the Lake Jackson Aquatic Club. He serves on the board of directors of Community Hospital, is a member of the Congressional Action Committee of the Brazosport Chamber of Commerce, a member of the Drug Abuse Committee for the Brazosport Independent School District, and serves on the steering committee for the Community Conference on Technical-Vocational Education.

A bit surprised and disappointed with the "bureaucratic monstrosity" in Washington, Dr. Paul confirmed that the problems he is concerned with—including the size and cost of government—really do exist. His congressional as well as campaign efforts (he faces reelection in November) are based on his slogan, "Put big government on a diet!"

Of his campaign strategy, the conservative stated, "I didn't make any promises. I never had to compromise my principles because I believed so strongly in them." He plans to continue his attack on big government in his campaign for reelection.

Dr. Paul said that other politicians have the opinion that doctors are disinterested and poor contributors to the political system. The new congressman's experience refutes this idea. He said he talked to many doctors during his campaign and found that they are getting more involved in legislative matters. He encourages physicians to continue to speak up for the entire system of free enterprise, citing the move toward government intervention in medicine as just one part of the problem.

The physician hopes to keep somewhat ac-

The Pauls pose for a family portrait. Pictured on the front row (l-r) are Robert, 10, Mrs. Paul, Dr. Paul, and Joylin, 3. On the back row (l-r) are Randy, 13, Lori, 16, and Ronnie, 17.

tive in the practice of medicine during his congressional service, but realizes that this is not very practical with today's congressional schedule. (His partner has assumed responsibility for their Lake Jackson medical practice.) Dr. Paul would like to see business people and professionals participate more in politics. He advocates the original concept of Congress in which the group met for only part of the year.

He called his personal schedule "disruptive." His family has remained in Lake Jackson and the congressman commutes every other weekend from Washington to his home district. His family includes his wife Carol and five children.

But despite the difficulties of conducting two election campaigns in the same year and the personal inconveniences of maintaining two households, Dr. Paul is enthusiastic about trading his "MD" for "MC" (member of Congress), at least for the present. He is optimistic that his win signals that people want change. He feels the nature of government can change if more citizens take a firm position on issues. But he added, "It's going to take a lot more work."

Ann Landers offers advice to doctors

In the "old days," her occupation would have been called advisor to the lovelorn, but syndicated columnist Ann Landers hopes to do something more than that today. Ms. Landers was a featured luncheon speaker during the May Annual Session of the Texas Medical Association in Dallas.

Speaking on what she termed her favorite subject, writing an advice column, the Sioux City, Iowa native told the gathering some of the "hows" and "whys" of her work as well as what she had learned from her readers.

"I get letters which should be going to doctors," Ms. Landers stated. Just as some of her readers really just want someone to listen when they write to her, so do some patients go to doctors with superficial complaints when they really have an underlying problem. The columnist urged doctors to "give patients an extra five or six minutes to listen."

Real letters?

Ms. Landers continued, "I frequently get asked, 'Are the letters on the level?' " Every letter published in the column, so far as she can determine, is real, according to the Chicago-based writer.

"Twenty years has made me shock proof. I believe anything about anybody," she declared and added that she has become tolerant of human weakness. "Each person is capable of doing something completely irrational and out of character at least once during his life."

Jokingly, she explained there were three kinds of people: 1) those who make things happen; 2) those who watch things happen; and 3) those who say 'what happened?'

"I'm not fooled by letters often. People in real trouble won't bother to compose a masterpiece. They will change pens, spill coffee on the paper, misspell words they know, add afterthoughts," she said. The tone of real letters is that of anxiety and humility.

An awesome responsibility

"Giving advice is an awesome responsibility. I am well aware of the confidence placed in me." Ms. Landers commented. She said she doesn't pretend to be an authority on any subject but is privileged to know top authorities in many fields from whom she gets "top notch" opinions.

Especially on college campuses, Ms. Landers is frequently asked, "How do you know you are always right? How can you sleep at night?"

She defends her work by saying the answers have been carefully researched. The average person reading her column does not have access to her sources. Consultants help her without pay because they want to help people. In addition, the columnist has allied herself with groups so that she can learn about different areas and to meet leaders in various fields.

For instance, she has been involved in medicine as a member of the Visiting Committee for the Board of Overseers for Harvard Medical School, a trustee for the Menninger Foundation, a member of the Mayo Clinic Sponsors Committee, and service on the boards of the National Dermatology Foundation, the Chicago Rehabilitation Institute, and the national board of the American Cancer Society. She has received a President's Citation for her work on alcoholism.

Ms. Landers contended that she practices

"medicine without a license" in her work. For instance, many people who have dermatology problems do not connect these problems with their emotional problems. She told of one man who wrote that every Dec 22 he broke out with hives. This had been going on for seven years. His wife got upset because he subsequently could not do anything with her or her mother. Her mother came to visit every Dec 24. "People often don't see illnesses could be psychogenerated."

Hard work

"I can still truthfully say I handle each day with enthusiasm. It is challenging and hard work," Ms. Landers said of her job.
Every word in the column is written by Ms. Landers herself. She has no "ghosts" and claims she will quit if the day comes when she cannot handle the load. At the time of her talk at the TMA meeting, she was eight weeks ahead of her column schedule.
"Each day's mail brings a surprise—a shock." She called her readers "unpredictable, super-sensitive, sharp-eyed, irascible, critical, and beautifully loyal."
"I love them all dearly," she proclaimed. She added that half of her mail comes from men who are also prone to hide her column under the sports pages. "Men usually write about a wife of long standing, a girlfriend of short standing, or the deadly combination of both," she joked.

A view of today's society

Ms. Landers feels Americans are paying dearly for their money-oriented culture. She often hears the following from execu-

Syndicated columnist Ann Landers and TMA President Dr. L. S. Thompson, Jr., swapped doctor stories during the recent TMA Annual Session in Dallas.

tives: "I've been so busy making a living, I've failed to make a life."

She is also often asked if children are worse today than 20-25 years ago?

"I say kids are 'different;' how can they be otherwise?" she answered. "There have been more radical changes in society in the last 25 years than the previous 200. These are different times; this is a different world."

She continued, "It doesn't make sense to judge children by the same standards as we were judged. They have different problems, different pressures, and different parents."

Children today, she said, have the disadvantage of too many advantages. They are "victims of our affluent society."

The columnist called permissiveness a "bummer," and said it was extremely damaging to children. "Kids want discipline and guidelines," she emphasized.

On the subject of television, Ms. Landers said the medium is the "biggest influence since the automobile" and has been the "principal promoter of the 'medicine chest' society."

"TV makes Americans feel they have a right to be free of fear, pain, anxiety, and irregularity," she told the medical gathering.

Helping people is what it's about

"I was first drawn to the advice field because I thought it was a good way to help and educate people" she commented. But the columnist admitted she did not realize, in the beginning, the extent of people's problems. She said many people have burdens that others never suspect. She added that people expect doctors to "feel fine and know all the answers."

She urged physicians to "be kind—you never know how much a little friendliness can help."

"Happy people are nice people," according to Ms. Landers. Quoting H. L. Mencken, she said, "If you want to make this world a happier place, wink at a homely girl."

"Life is difficult for everyone. Never envy the family next door; they may be envying you," she advised.

What has she learned from her readers?

She enumerated three points:

- Life is what happens to you when you were planning something else.
- Trouble isn't always all bad. It may be a blessing in disguise. It is the "common denominator of living" and "the great equalizer."
- Money is the overrated of all commodities. People do not write Ann Landers about money problems, but people problems.

MEDICINE AND THE LAW

TEXAS COURT RULES ON STANDARD OF CARE IN CASE OF ALLEGED UNNECESSARY SURGERY

The following case[1] involves a theory of recovery against a physician not previously recognized. The appeals court stated that the better rule concerning unnecessary surgery is that a physician is not guilty of malpractice when the method of treatment used is supported by a respectable minority of physicians so long as the physician adhered to the acceptable procedures espoused by the minority.

Facts

The patient had an advanced case of emphysema when first examined by the defendant physician. After consultation with the doctor, the patient was advised that carotid body surgery might prove beneficial. The doctor performed the operation and removed the carotid body gland from each side of the patient's neck together with certain associated nerves. The doctor had told the patient that the operation was not a cure, but that it was hoped that it would lessen the spasms of the bronchial tubes and improve the circulation of the lungs. This admittedly was a controversial procedure, but evidence was presented that carotid body surgery had been performed by at least one other Texas doctor, a Boston physician, and doctors in Japan, Poland, and Italy. The doctor stated that 85% of some 1,200 persons on whom he had performed this operation had derived some benefit. Other testimony showed the procedure is generally recognized as having no value in treating emphysema, and, in some cases, may be detrimental to the patient's health. The trial court had refused to allow the submission of this case on a theory of ordinary negligence, and the jury found the doctor not guilty of gross negligence. The basis of the appeal was that the trial court erred in refusing to submit the patient's theory that the performance of carotid body surgery as a treatment for emphysema was ordinary negligence.

Discussion

The court of appeals stated that in dealing with this question it was confronted with the apparently unique issue in Texas of determining the standard to be used when a claim of medical malpractice is based upon an allegedly unnecessary procedure. There was no evidence in the trial court record to support an assertion that the surgery itself was unskillful, or negligently performed; only that it was improper to perform the operation in the first place. The court stated there was a paucity of cases dealing with the issue of unnecessary surgery, and there has not been a consensus of what is the applicable test. After discussion of cases in other states, the Texas court adopted the rule that a physician is not guilty of malpractice when the method of treatment used is supported by a respectable minority of physicians, so long as the physician adhered to the acceptable procedures of administering the treatment as espoused by the minority. The court stated the determination should be predicated upon ordinary negligence, i.e., what a reasonable, prudent physician would do under the same or similar circumstances. The court said it saw no reason for the standard to be otherwise for an action on unnecessary surgery.

Moreover, the court indicated in this instance it was not dealing with those procedures which might be termed either experimental or progressive. Further, the opinion stated that the rule enunciated should not be construed as being applica-

ble to physicians who perform and adhere to valid surgical procedures which legitimately seek to advance medical knowledge in areas which are as yet unexplored or not adopted. Where, as here, the pleadings and the evidence reveal the cause of action is not based upon either experimental or progressive surgical techniques, the jury should be instructed that these issues are not involved in the case—in effect carving out an exception to the rule as adopted by the court.

In another question in the same case, the court specifically stated the trial court acted properly in quashing subpoenas to the executive secretary of the Harris County Medical Society to produce certain records of its Board of Censors under Tex Rev Civ Stat Ann, Art 447d, Sec 3, because the meaning of that statute is clear. Accordingly, evidence requested by the plaintiff was not available.

Dissent

There was a strong dissenting opinion by Chief Justice Martin Dies, Jr., on the basis the evidence did not raise a jury issue of malpractice (ordinary negligence) by a physician. He stated that there was no evidence the surgery made the patient's condition any worse; the patient had lived some six years after the surgery; and there was no indication his death was in any way connected with the surgery. Further, there were no allegations or evidence of unskillfulness in the surgery by the physician.

The judge was unable to find any case in America holding a physician guilty of malpractice under these circumstances.

The minority opinion also stated the rule adopted by the majority must surely "inhibit and discourage new treatments and procedures" raising the questions, "When does surgery stop being experimental? How many is a respectable minority?" The judge observed the law must recognize that by the nature of medicine there will always be differences of professional opinion as to diagnosis and treatment, and he feared the long-term effect of the majority opinion would discourage new procedures and techniques so necessary to improved health care. Emphasizing again his dissent was strictly limited to the facts of this case where (1) the procedure is thought by some physicians to be of help, (2) where there is no showing of unskillfulness on the part of the physician, and (3) where there is no showing of injury to the patient other than the normal injury attendant with any surgery.

Conclusion

Heretofore from a practical as well as a legal standpoint, the chances for the injured patient's success in cases of alleged negligence in surgery depended upon the answer to one question: "Did the surgeon by his conduct negligently cause an injury or condition that did not predate the surgical procedure?" Absence of the existence of a contract for cure, the physician has generally not been held liable when the surgery fails to achieve a successful result. In other words, the failure of the surgery to produce beneficial effects in most instances does not form a basis of recovery. It was felt heretofore that the chance of success for the injured patient in a surgery case depends upon whether the surgical procedure resulted in harm or injury that would not have been experienced had he not consented to the surgery or had the surgery been performed in keeping with the usual and accepted practices.

This case represents perhaps another theory of recovery against a physician not previously recognized. It is hoped a reversal or modification will be reached if the issue is presented to the Supreme Court of Texas.

Jack Maroney, Ace Pickens
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

1. *Hood vs Phillips,* No. 7769, Court of Civil Appeals, Ninth Supreme Judicial District, Beaumont, Texas, April 22, 1976.

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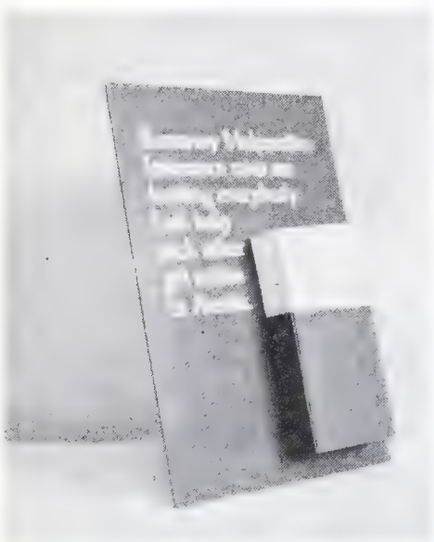

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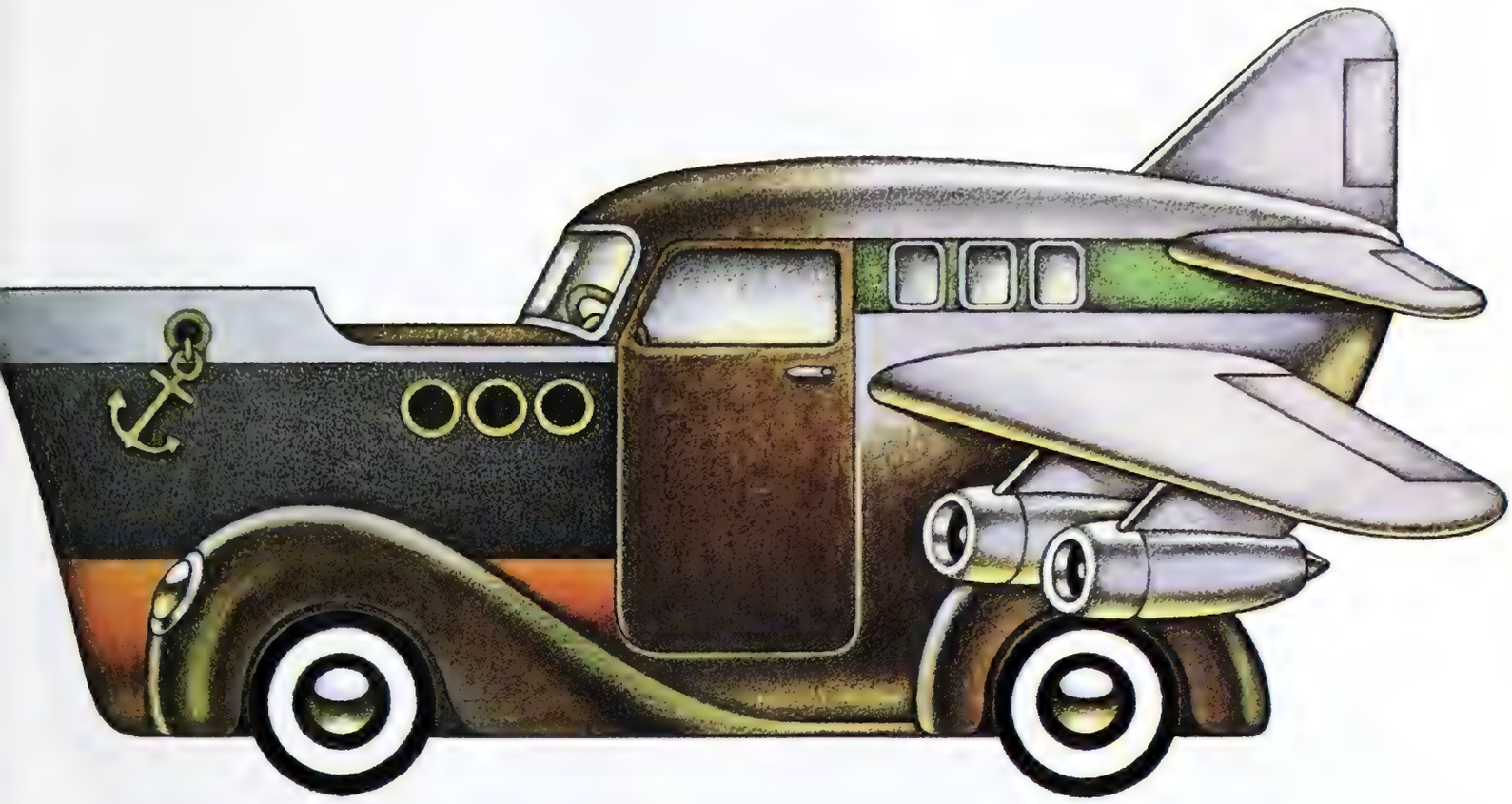

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* **Indications:** *Edema:* That associated with congestive heart failure, cirrhosis of the liver, the nephrotic syndrome; steroid-induced and idiopathic edema; edema resistant to other diuretic therapy. *Mild to moderate hypertension:* Usefulness of the triamterene component is limited to its potassium-sparing effect.

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Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

Supplied: Bottles of 100 capsules; in Single Unit Packages of 100 (intended for institutional use only).

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This new design will help pharmacists, physicians, nurses, and patients identify Orinase by name and manufacturer. The number on the tablet is for identification and is not related to tablet strength.

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WHEN ANXIETY INTERFERES.

The cardiac patient and anxiety.

"The [cardiac] patient is anxious about minor symptoms, about the implications of his diagnosis, and about real or imagined limitations of function."*

The worst is over. The cardiac patient is out of the acute stage, out of the hospital, and well on his way to recovery. How quickly he comes back to near normal functioning may depend on his psychological as well as his physical rehabilitation.

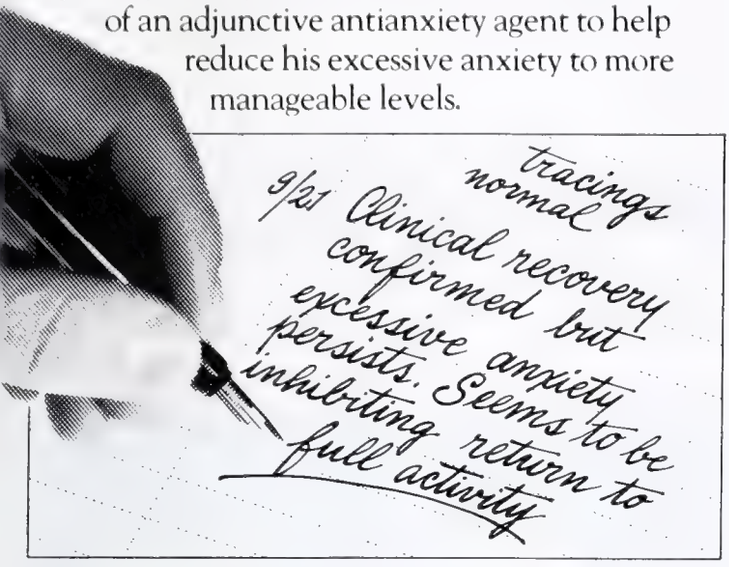
Clinical anxiety, for example, may be one reason for prolonged recuperation following cardiac healing. Yet anxiety can sometimes be beneficial in facilitating patient compliance.

The patient who is realistically concerned about resuming his precoronary functioning may be highly motivated to adhere to his rehabilitation regimen. However, the cardiac patient with *excessive* or unresolved anxiety may be so fearful of future heart failure that he refrains from your prescribed regimen. These excessively anxious cardiac patients eventually present the same clinical characteristics as patients deconditioned by bed rest.

Excessive anxiety can interfere with patient management

When excessive anxiety diminishes your

patient's ability to participate fully in his rehabilitation program, your counseling and reassurance are often sufficient. But when his anxiety is so great that it actually interferes with his ability to listen and respond, you may want to consider the addition of an adjunctive antianxiety agent to help reduce his excessive anxiety to more manageable levels.



Librium® (chlordiazepoxide HCl) an effective adjunct to your reassurance and counseling

Safety: Librium has a highly favorable benefits-to-risk ratio and a wide margin of safety. Because of its low incidence of side effects, it is regarded as one of the safest antianxiety agents available. And Librium does not adversely affect the cardiovascular system. See complete product information for warnings, precautions and adverse reactions.

Performance: Hundreds of clinical trials, thousands of published papers, and millions of patients comprise the record of performance for Librium.

Concomitant use: Of special significance in treating the cardiac patient already taking multiple agents is the fact that Librium is used concomitantly with most primary medications, such as cardiac glycosides, diuretics and antihypertensives.

*Zohman BL: *Geriatrics* 28:110-119, Feb 1973

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported. Use of any drug in pregnancy, lactation, or in women of childbearing age requires that its potential benefits be weighed against its possible hazards.

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Supplied: Librium® Capsules containing 5 mg, 10 mg or 25 mg chlordiazepoxide HCl. Libritabs® Tablets containing 5 mg, 10 mg or 25 mg chlordiazepoxide.

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THE ANXIETY-SPECIFIC

VISUAL FOCUS ON ACUTE GOUTY ARTHRITIS

Foot of patient with acute gouty arthritis as seen by conventional x-ray.

Scintiphotogram of same foot reflects inflammatory process.

The scintiphotograph on the right shows increased uptake of radiotechnetium polyphosphate in the metatarsophalangeal joint and the proximal interphalangeal joint of the great toe of a patient with acute gouty arthritis. This increased uptake probably results from increased vascularity in the affected areas.

For a more detailed description of scintiphotography, see "addendum" at right.

THERAPEUTIC FOCUS ON

CAPSULES, 25 mg and 50 mg

INDOCIN®

(INDOMETHACIN | MSD)

helps relieve pain and other symptoms of inflammation in acute gouty arthritis in selected patients

INDOCIN is a potent drug with anti-inflammatory, antipyretic, and analgesic properties. It should not be used in conditions other than those recommended. Although INDOCIN does not alter the progressive course of the underlying disease, in selected patients with acute gouty arthritis it has been found highly effective in relieving pain and in reducing fever, swelling, and tenderness.

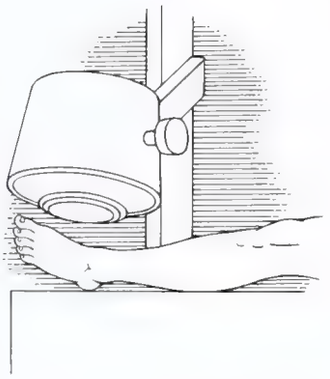
MSD
MERCK SHARP & DOHME

For a brief summary of prescribing information, please see following page.

addendum

MSD
MERCK SHARP & DOHME

Facts about Scintiphotography



In recent years a variety of radiopharmaceuticals have been employed to aid in the diagnosis of bone and joint disorders. The joint-imaging technique consists of injecting technetium polyphosphate intravenously, and imaging is performed with the scintillation camera two hours after the administration of the radionuclide. In general, for joint surveying, the shoulders, elbows, hands, wrists, knees, ankles, feet, and vertebral column are mapped. The entire scanning process takes approximately one hour. The criterion for a positive image is a higher concentration of radioactivity in a joint region than in adjacent nonarticular bone. In effect, each patient serves as his own control.

INDOCIN®
(INDOMETHACIN | MSD)

helps relieve pain
and other symptoms
of inflammation
in acute
gouty arthritis
in selected patients

IMPORTANT NOTE: INDOCIN (Indomethacin, MSD) cannot be considered a simple analgesic and should not be used in conditions other than those recommended. The drug should not be prescribed for children because safe conditions for use have not been established.

Because of the high potency of the drug and the variability of its potential to cause adverse reactions, the following are strongly recommended: 1) the lowest possible effective dose for the individual patient should be prescribed. Increased dosage tends to increase adverse effects, particularly in doses over 150-200 mg per day, without corresponding clinical benefits; 2) careful instructions to, and observations of, the individual patient are essential to the prevention of serious and irreversible, including fatal, adverse reactions, especially in the aging patient.

Contraindications: Children 14 years of age and under; pregnant women and nursing mothers; active gastrointestinal lesions or history of recurrent gastrointestinal lesions; allergy to aspirin or indomethacin.

Warnings: *Gastrointestinal Effects:* Because of the occurrence and, at times, severity of gastrointestinal reactions, be continuously alert for any sign or symptom signaling a possible gastrointestinal reaction. The risks of continuing therapy with INDOCIN in the face of such symptoms must be weighed against the possible benefits to the individual patient. Gastrointestinal effects may be reduced by giving the drug immediately after meals, with food, or with antacids. Use greater care in aging patients.

Ocular Effects: Corneal deposits and retinal disturbances, including those of the macula, have been observed in some patients on prolonged therapy. Discontinue therapy if such changes are observed. Ophthalmologic examination at periodic intervals is desirable in patients on prolonged therapy.

Central Nervous System Effects: INDOCIN may aggravate psychiatric disturbances, epilepsy, and parkinsonism, and should be used with considerable caution in patients with these conditions. If severe CNS adverse reactions develop, discontinue the drug.

Precautions: Blurred vision may be a significant symptom that warrants a thorough ophthalmologic examination. Patients should be cautioned about engaging in activities requiring mental alertness and motor coordination, as driving a car. Headache which persists despite dosage reduction requires complete cessation of the drug. May mask the usual signs and symptoms of infection; therefore, the physician must be continually on the alert for this and should use the drug with extra care in the presence of existing controlled infection. After the acute phase of the disease is under control, an attempt to reduce the daily dose should be made repeatedly until the patient is off entirely.

Drug Interactions: Although INDOCIN has not influenced the hypoprothrombinemia produced by anticoagulants, patients on anticoagulant therapy should be observed closely for alterations in prothrombin time. In patients receiving probenecid, plasma levels of indomethacin are likely to be increased and a lower total daily dose of INDOCIN may produce a therapeutic effect; increases in the dose of INDOCIN should be made cautiously and in small increments.

Adverse Reactions: *Gastrointestinal Reactions:* Single or multiple ulcerations of the esophagus, stomach, duodenum, or small intestine, including perforation and hemorrhage, with fatalities in some instances; rarely, intestinal ulceration has been associated with stenosis and obstruction; gastrointestinal bleeding without obvious ulcer formation; perforation of preexisting sigmoid lesions (diverticulum, carcinoma, etc.); rarely, increased abdominal pain in ulcerative colitis patients or development of ulcerative colitis and regional ileitis; gastritis may persist after the cessation of the drug; nausea, vomiting, anorexia, epigastric distress, abdominal pain, and diarrhea.

Eye Reactions: Corneal deposits and retinal disturbances, including those of the macula, have been observed on prolonged therapy; blurring of vision.

Hepatic Reactions: Rarely, toxic hepatitis and jaundice, including some fatal cases.

Hematologic Reactions: Aplastic anemia, hemolytic anemia, bone marrow depression, agranulocytosis, leukopenia, and thrombocytopenic purpura may occur rarely. Since some patients manifest anemia secondary to obvious or occult gastrointestinal bleeding, appropriate blood determinations are recommended.

Hypersensitivity Reactions: Acute respiratory distress, a rapid fall in blood pressure resembling a shock-like state, angioedema, dyspnea, asthma, angiitis, pruritus, urticaria, skin rashes, purpura.

Ear Reactions: Hearing disturbances—deafness reported rarely; tinnitus.

Central Nervous System Reactions: Psychic disturbances including psychotic episodes, depersonalization, depression, and mental confusion; coma; convulsions; peripheral neuropathy; drowsiness; lightheadedness; dizziness; syncope; headache.

Cardiovascular-Renal Reactions: Edema, elevation of blood pressure, hematuria.

Dermatologic Reactions: Loss of hair, erythema nodosum.

Miscellaneous: Rarely, vaginal bleeding, hyperglycemia, glycosuria, ulcerative stomatitis, and epistaxis.

Supplied: Capsules containing 25 mg indomethacin each, in single-unit packages of 100 and bottles of 100 and 1000; capsules containing 50 mg indomethacin each, in single-unit packages of 100 and bottles of 100.

For more detailed information, consult your MSD representative or see full prescribing information. Merck Sharp & Dohme, Division of Merck & Co., Inc., West Point, Pa. 19486

MSD MERCK SHARP & DOHME

Medical Newsmakers

LYN I. HUNT of Midland and PAUL A. THOMPSON of Memphis have received the Gold Headed Cane Award and the Outstanding Three Year Graduate Award, respectively, from The University of Texas Medical Branch at Galveston. The honors are presented annually to graduating students in the fourth and third year classes who epitomize the ultimate in patient care.

The outstanding senior citizen award from the Women's Civic Club Council of Fort Worth was recently presented to DR. MAY OWEN of Fort Worth. Dr. Owen, recipient of many honors, has also recently been reelected director of the Tarrant County Junior College board of trustees.

DR. NICHOLAS C. HIGHTOWER, JR., of Temple received a special citation from the Food and Drug Administration in a special awards ceremony May 25 in Rockville, Md. The citation reads as follows: "In recognition of outstanding contributions to the work of the Food and Drug Administration as Chairman of the Over-the-Counter Laxative, Antidiarrheal, Emetic, Antiemetic Drug Review Panel and as consultant to the Gastrointestinal Drug Advisory Committee."

DRS. GILBERT H. FLETCHER and ROBERT S. NELSON were recently honored by The University of Texas M D Anderson Hospital and Tumor Institute. The two physicians received the hospital's Distinguished Service Award for advancing the medical specialties of radiotherapy and gastroenterology. Dr. Fletcher is head of the Department of Radiotherapy and Dr. Nelson serves as chief of the Gastroenterology Service at the hospital.

Baylor College of Medicine has named DR. ROBERT F. SPARKMAN as its distinguished alumnus for 1976. Dr. Sparkman was honored June 12 during the annual Baylor medical alumni dinner in Houston. The surgeon has practiced in Dallas for 30 years.

DR. BARBARA H. BOWMAN, I. H. Kempner Professor and chairman of the Department of Human Biological Chemistry and Genetics at The University of Texas Medical Branch at Galveston, has been awarded the Katharine and Nicholas Leone Award for Outstanding Administrative Excellence, presented annually by the Medical Branch. The award honors those individuals at the medical branch who have attained a level of professionl achievement which warrants recognition. Among her accomplishments, Dr. Bowman has won international acclaim for research in cystic fibrosis.

DR. ROBERT GRAHAM of Houston has been named deputy director of the Bureau of Health Manpower for the U S Department of Health, Education, and Welfare. Dr. Graham has been an instructor in the Community Medicine Department of Baylor College of Medicine. He worked primarily in the health management program, helping develop a model for the distribution of

primary care doctors throughout Texas. The Bureau of Health Manpower is responsible for implementing health manpower legislation and overseeing federal funds designated for medical education.

A professor of pediatrics and community medicine at Baylor College of Medicine has been honored by the college's alumni as the recipient of the 1976 Distinguished Faculty Award. DR. MURDINA DESMOND is the first female faculty member at Baylor to be recognized for the award. A native of Scotland and a graduate of Temple University School of Medicine, Dr. Desmond has been a member of the faculty for 28 years.

Four faculty members at The University of Texas Medical Branch have been selected by their students as outstanding educators. They are DR. MICHAEL B. HANCOCK, DR. GERALD A. BEATHARD, DR. JAY C. FISH and DR. MELVIN H. SCHREIBER.

Three Texas physicians have been awarded research project grants by the Southern Medical Association. They are DR. NED SNYDER III of Galveston, Dr. ABRAHAM N. FLEMENBAUM of Lubbock, and DR. THOMAS F. KNIGHT of Houston.

Two Texans have been named recipients of Southern Medical Association residency training loans. They are DR. GARY M. McWILLIAMS and DR. WILLIAM H. GORMAN, both of San Antonio.

Medicine in literature

IN THE TMA LIBRARY

Brownson C B (ed): *1976 Congressional Staff Directory*. Mt. Vernon, Congressional Staff Directory, 1976.

Fruehauf E L (ed): *Shared Services, Shared Ideas: Proceedings of the Fourth Annual Meeting, South Central Regional Group, Medical Library Association*. Oklahoma City, University of Oklahoma Health Sciences Center Library, 1976.

Goldman M J: *Principles of Clinical Electrocardiography*, ed 9. Los Altos, Lange Medical Publications, 1976.

Gorlick S H: *Now that You've Incorporated: A Management Manual for Physicians*, rev ed. Oradell, N J, Medical Economics Company, 1975.

McNamara B: *Step Right Up: An Illustrated History of the American Medicine Show*. Garden City, Doubleday & Company, Inc, 1976.

Nugent N: *Hysterectomy*. Garden City, Doubleday & Company, Inc, 1976.

Ropes M W: *Systemic Lupus Erythematosus*. Cambridge, Harvard University Press, 1976.

Ulrich's International Periodicals Directory, ed 16. New York, R R Bowker Co, 1976.

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

Eric Buning
Houston, 1933-1976

R. T. Canon
Lubbock, 1890-1976

H. H. Cartwright
Breckenridge, 1893-1976

M. A. Davison
Marlin, 1901-1976

L. B. Entzminger, Jr.
Houston, 1944-1976

P. E. Klinger
San Antonio, 1922-1976

Paul Kunstadt
Monahans, 1900-1976

F. C. Scott
Haskell, 1885-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. Buning

Dr. Cartwright

Dr. Eric Buning

Dr. Eric Buning, a Houston physician, died Feb 20, 1976, in a fire in his apartment.
Dr. Buning, 41, had practiced in Houston since 1960.
Dr. Buning was a native of Indonesia. He graduated from college and medical school in the Netherlands, and his internship was at Methodist Hospital of Dallas. His residency was at Austin State Hospital.
The doctor had been a member of the Harris County Medical Society for 15 years.
Surviving Dr. Buning are his wife, Annette Karr Buning, and sons, Kingsley Eric Buning and Todd Rodney Buning, all of Houston.

Dr. R. T. Canon

Dr. Robert Travis Canon, 85, a longtime Lubbock physician, died Feb 9, 1976, following a brief illness.
During his career, which spanned 57 years, Dr. Canon served as physician to President Franklin D. Roosevelt and was saluted by the Panhandle District Medical Society Bulletin (1969).
Dr. Canon was a native of Moscow, Tex.
He was graduated from The University of Texas Medical Branch, Galveston, in 1917 as World War I started. He enlisted in the Navy as a medical officer and interned at Washington, DC.
Most of his Naval service during this period was on the USS Huntington, and he later served at Quantico, Va; Annapolis, Md; and on the hospital ship Mercy, where he was chief of the eye, ear, nose and throat service.
Dr. Canon transferred to the Naval Reserve and came to Lubbock in 1928 to enter private practice. He was recalled to active duty in Philadelphia at the outbreak of World War II.
Dr. Canon, who practiced full-time until becoming ill, served as chief of staff at West Texas Hospital, Lubbock, was a past president of the Lubbock-Crosby-Garza County Medical Society, and was a member of the American Medical Association.
Additionally, he was a fellow of the American College of Surgeons, a member of the Masonic Lodge and the Lubbock and West Texas Chambers of Commerce.
Dr. Canon is survived by his wife, Lorean Lingo Canon, Lubbock; two sons, R. Travis Canon, Jr., of Palm Beach, Fla, and George Canon of Lubbock; a sister, Mrs. W. C. Stangel, also of Lubbock; and four grandchildren.

Dr. H. H. Cartwright

Dr. Hubert Henderson Cartwright, honorary member and past vice-president of Texas Medical Association, died Feb 29, 1976, at the age of 82.
Dr. Cartwright had practiced in Breckenridge since 1920. He retired in 1968 because of failing eyesight.
The family practitioner was born in Amarillo, where his father also had practiced medicine. He attended Amarillo public schools, Polytechnic College of Fort Worth, and The University of Texas. He received his medical degree from UT in 1919, and served an internship at Scott and White Hospital, Temple.
Dr. Cartwright did postgraduate work in St. Louis and Chicago and at the Mayo Clinic in Rochester, Minn. He also studied at the International Postgraduate Assembly in Canada and Europe in 1929.
He served in the US Army in World War I, and was a member of the American Legion for 55 years. He was a past president of the Lions Club, a member of the board of the Young Men's Christian Association (YMCA) (42 years) and co-chairman of the Cancer Society (15 years). He also was a member of the First Christian Church, the Masonic Lodge, the Moslah Shrine, and the Elks Lodge.

The doctor's professional memberships included the American Medical Association, the American Academy of Family Physicians, and the Stephens County Medical Society (past president).
Dr. Cartwright is survived by his wife, Ida May Buford Cartwright; two daughters, Mrs. Dorothy Burmah Morrison and Mrs. A. C. Black, Jr., both of Dallas; four grandchildren, and two great-grandchildren.

Dr. M. A. Davison

Dr. Milton Andress Davison, 74, died Feb 27, 1976, in a rest home in Marlin, Tex.
Dr. Davison was born in Reagan, Tex. In 1924, he was graduated from The University of Texas Medical Branch. His internship was at St. Mary's Hospital in Galveston.
Dr. Davison began his medical practice in Marlin in 1925. He continued to practice there until retiring in 1971.
He was an honorary member of Texas Medical Association, a past president of the Texas Association of Obstetrics and Gynecology, and a founding fellow of the American College of Obstetrics and Gynecology.
He also was a member of the Central Association of Obstetrics and Gynecology, the Association of Physicians and Surgeons, the Texas Pediatrics Association, American Association of Pediatrics, the Falls County Medical Society, and American Medical Association.
The doctor's nonprofessional memberships included the Marlin Masonic Lodge No. 152 and the First Baptist Church of Marlin, where he had served as a deacon for 45 years.
Surviving Dr. Davison are his wife, Lois Threadgill Davison, Marlin; three sons, Milton A. Davison, Jr., and Stephen D. Davison, both of Dallas, and Richard R. Davison of Bryan; a brother, Hugh Davison of Reagan; seven grandchildren, and two great-grandchildren.

Dr. L. B. Entzminger, Jr.

Houston otorhinolaryngologist Dr. Lindell Baker Entzminger, Jr., died Feb 18, 1976, in the crash of an Air National Guard jet trainer at Ellington Air Force Base.
Dr. Entzminger, 32, had practiced in Houston since July 1975. He had been a member of the Air Force Reserve and Air National Guard for seven years. He was a major senior flight surgeon in the 147th Fighter Interceptor Group at Ellington.
The physician was born in Long Beach, Calif. He was a graduate of The University of Texas at Austin and The University of Texas Medical Branch, Galveston. Upon graduation from medical school in 1969, Dr. Entzminger served an internship at UTMB. He held a residency at Parkland Memorial Hospital, Dallas; and he was chief resident and an instructor at Milton S. Hershey Medical Center of the Pennsylvania State University, Hershey, Pa.
Dr. Entzminger's professional memberships included the Harris County Medical Society, American Medical Association, Aerospace Medical Association, American College of Surgeons, American Academy of Facial Plastic and Reconstructive Surgery, Pennsylvania Academy of Ophthalmology and Otorhinolaryngology, and the Society of US Air Force Flight Surgeons.
Survivors include his wife, Nanette Hubler Entzminger, and four children, Lindell III, Cheri Ann, Jennifer Holly, and Heather Lin, and his parents, Dr. and Mrs. L. B. Entzminger, Sr., all of Houston.

Dr. Davison

Dr. Entzminger

Dr. Klinger

Dr. P. E. Klinger

Dr. Paul Emil Klinger, 53, died March 7, 1976. He was a native and resident of San Antonio.
Dr. Klinger, a thoracic, cardiac and vascular surgeon, was a founding member of the American Society of Thoracic Surgeons and had been chairman of the Thoracic

Dr. Kunstadt

Dr. Scott

and Cardiovascular Surgery Department at Santa Rosa Medical Center, San Antonio, for many years. He also was president-elect of the International Medical Society and a clinical professor at The University of Texas Medical School at San Antonio.
The physician attended Texas A&M University and The University of Texas. In 1945, he was graduated from The University of Texas Southwestern Medical School. His internship was at Baylor University Medical Center, Dallas. He also attended the University of Colorado School of Medicine, Denver, and received his Master of Science degree in surgery.
Dr. Klinger attained the rank of lieutenant colonel during seven years in the US Army Medical Corps. He began his practice in San Antonio after he was separated from the service in 1954.
The doctor's professional memberships included the American College of Cardiology, the International College of Surgeons, the American College of Surgeons and the American College of Chest Physicians.
Additionally, he was a past president of the San Antonio Kiwanis Club and the Bexar County Chapter of the American Heart Association.
Surviving are his wife, Marilyn Overman Klinger, San Antonio; two daughters, Kathryn Jane Towers, Midland, and Marilyn Jane Tesoro, Houston; his sister, Mary Reid; and several nieces.

Dr. Paul Kunstadt

Dr. Paul Kunstadt, 75, died March 12, 1976, following a long illness. He was a resident of Monahans.
Dr. Kunstadt was born in Vienna and received his undergraduate and medical education there. He practiced in Vienna from 1933 to 1938, when he came to America as a refugee fleeing the Nazis. He lived in New York and Wichita Falls, Tex, before moving to Monahans in 1939. He continued his general practice in Monahans until his retirement in 1969.
Dr. Kunstadt, who became a naturalized American citizen in 1943, was active in numerous civic activities. These included service as a member of the local school board and the Music Appreciation Club, president of the Rotary Club and the Ward County Society for Crippled Children, and as a member of the Monahans Boy's Club's board of directors.
He also was an honorary member of TMA, a past president of the District 1 Medical Society, and former head of the Ward County Memorial Hospital staff.
In recognition of his community service, Jan 2, 1966, was proclaimed Paul Kunstadt Day in Monahans.
Dr. Kunstadt is survived by his wife, Eva Herbst Kunstadt, Monahans; one son, Peter Michael Kunstadt, Irving; and one brother, John Kunstadt, New York.

Dr. F. C. Scott

Dr. Frank Clinton Scott, 90, of Haskell, died Feb 14, 1976.
Dr. Scott, a native of Illinois, moved to Haskell in 1939 and practiced there until ill health forced his retirement in 1969.
In 1908, Dr. Scott received his medical degree from Keokuk Medical College, College of Physicians and Surgeons, Iowa. He was an EENT specialist.
Prior to moving to Haskell, Dr. Scott had practiced in Waco, Lubbock, Wink, Stamford, and Seagraves. He also had practiced in Lovington, NM, and Chariton, Iowa. He had served as assistant county health officer in Winkler County, Texas.
Dr. Scott was a member of the First United Methodist Church and a charter member of the administrative board of the church. He was a former member of the Haskell Lions Club and Masonic Lodge No. 682.
Additionally, the physician was a former member of the Medical Board of Haskell Memorial Hospital, the Baylor-Knox-Haskell County Medical Society, and the American Medical Association.
Surviving Dr. Scott are his wife, Lola Welsh Lemmon Scott, Haskell; two daughters, Ester Helber of Grand Prairie and Thelma Dow of Midland; two step-daughters, Frankie Doris Payne of Moody and Marticia B. McDonald of Abilene; nine grandchildren, and eight great-grandchildren.

BEVERLY HILLS HOSPITAL
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INPATIENT-OUTPATIENT
DEPARTMENT OF ADOLESCENT PSYCHIATRY

A Private 115 bed psychiatric hospital located in Oak Cliff on 18 acres amidst natural wooded surroundings. A multi-approach treatment center of neurologic and all psychiatric disorders. Treatment modalities include Somatic Therapy, Milieu Therapy, Chemotherapy, Individual and Group Therapy and Behavior Modification. Complete facilities for OT-RT under the division of trained personnel. An individually directed program based on full diagnostic evaluation and actual performance administered by a staff skilled in special education and problems of the adolescent and young adult.

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consider the effect on coexisting glaucoma when you prescribe a vasodilator*

a vasodilator that has not been reported to raise intraocular pressure

VASODILAN®
(ISOXSUPRINE HCl)

TABLETS, 20 mg.

the compatible vasodilator

Mead Johnson LABORATORIES

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*Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500, 1000, 5000 and Unit Dose.

Famous Fighters

NEOSPORIN® Ointment
(polymyxin B-bacitracin-neomycin)
is a famous fighter, too.

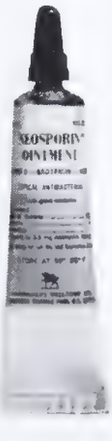
Provides overlapping, broad-spectrum antibacterial action to help combat infection caused by common susceptible pathogens (including staph and strep).

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.



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WHEN DIET ALONE FAILS TO LOWER CHOLESTEROL

CONSIDER

Choloxin®

(Sodium Dextrothyroxine)

AN IMPORTANT NOTE:
It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

A Proven Cholesterol-Lowering Adjunct to Diet.

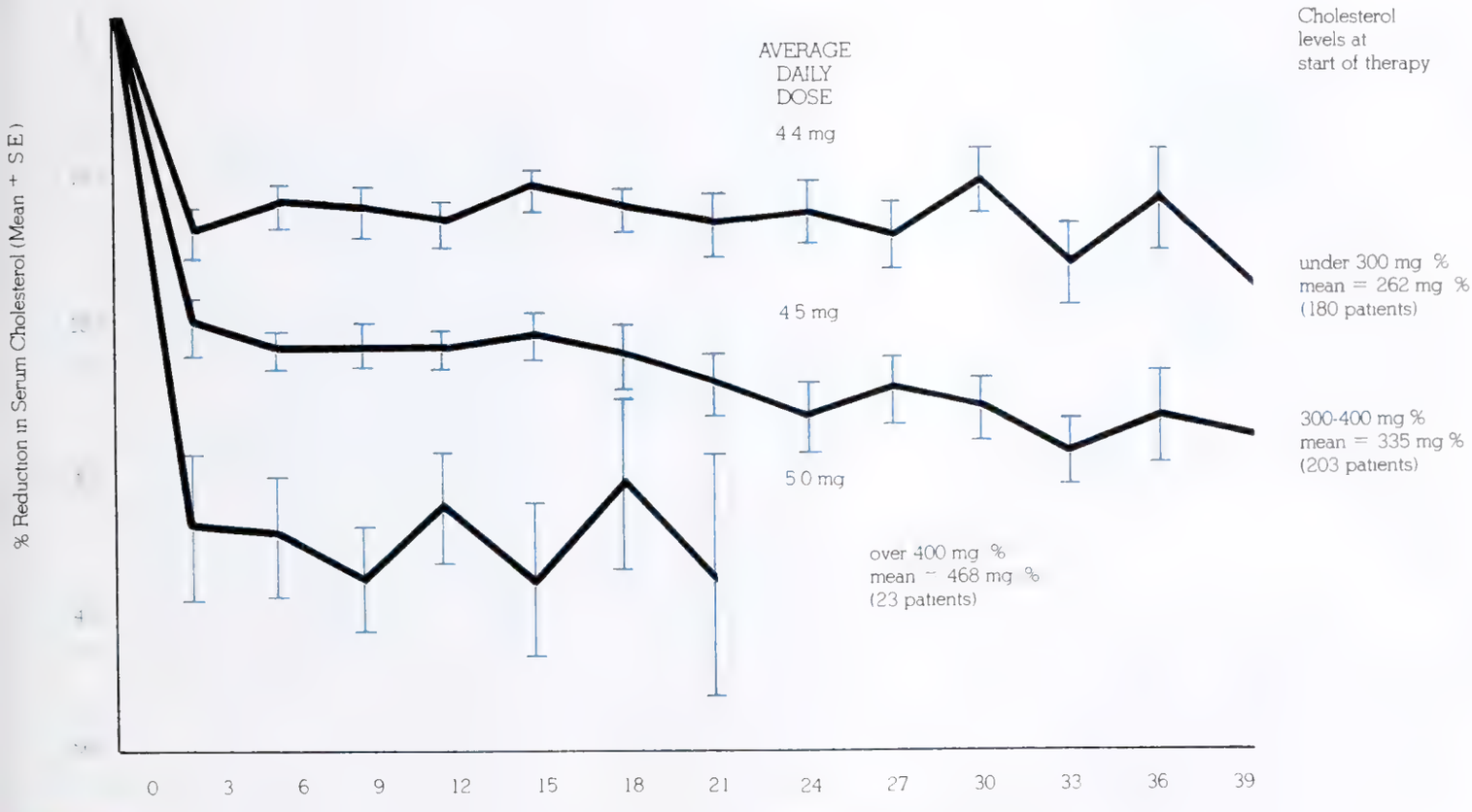
An effective agent for low density lipoproteins in Euthyroid, Non-Cardiac Patients.

CHOLOXIN® (Sodium Dextrothyroxine) is the convenient and practical way to manage the hard-to-manage patient who doesn't always follow the diet regimen that you've outlined.

Convenient once-a-day dosage encourages patient cooperation, and it's economical for long-term therapy.

CHOLOXIN (Sodium Dextrothyroxine) is a thyroid analogue which effectively lowers elevated serum cholesterol 15 to 35% (see chart below) in low density lipoproteins.

CHOLOXIN (Sodium Dextrothyroxine) has undergone ten years of clinical trials and seven years of practice. The clinical trials consisted of 337 clinical studies involving over 3,000 hypercholesterolemic non-cardiac patients. It is among the most thoroughly evaluated drugs ever presented to physicians.



NOT ALL PATIENTS ARE REPRESENTED AT EACH TIME INTERVAL

NOTE:
See following page for full prescribing information.

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

Choloxin
(Sodium Dextrothyroxine)

Effectively Lowers Elevated Cholesterol With Convenient Once-A-Day Dosage

Four strengths . . 1, 2, 4, and 6 mg . . are available making the scored tablet regimen a flexible dosage system. And, for most patients, CHOLOXIN tablets offer once-a-day dosage

CHOLOXIN® (sodium dextrothyroxine) Single-Tablet-A-Day Dosage Schedules

See prescribing information in package insert reproduced below

	Starting Dosage	Increased Monthly by	Usual Maintenance	Maximal Recommended
Adult Hypercholesterolemic	1 0-2 0 mg	1 0-2 0 mg	4 0-8 0 mg	4 0-8 0 mg
Pediatric Hypercholesterolemic	0 05 mg /kg body weight	0 05 mg /kg	0 1 mg /kg body weight	4 0 mg
Hypothyroid Cardiac	0 5-1 0 mg	1 0 mg	4 0 mg	4 0 mg

Description
CHOLOXIN (sodium dextrothyroxine) is the sodium salt of the dextrorotatory isomer of thyroxine It is chemically described,as D-3,5,3',5'-tetraiodothyronine sodium salt

Actions
The predominant effect of CHOLOXIN (sodium dextrothyroxine) is the reduction of serum cholesterol levels in hyperlipidemic patients Beta lipoprotein and triglyceride fractions may also be reduced from previously elevated levels

Most of the available evidence indicates that CHOLOXIN stimulates the liver to increase catabolism and excretion of cholesterol and its degradation products via the biliary route into the feces Cholesterol synthesis is not inhibited and abnormal metabolic end-products do not accumulate in the blood

Indications
This is not an innocuous drug. Strict attention should be paid to the indications and contraindications.

CHOLOXIN (sodium dextrothyroxine) is an antilipidemic agent used as an adjunct to diet and other measures for the reduction of elevated serum cholesterol (low density lipoproteins) in euthyroid patients with no known evidence of organic heart disease

The drug is also indicated in the treatment of hypothyroidism in patients with cardiac disease who cannot tolerate other types of thyroid medication **Before prescribing, note the following: Results from a randomized clinical study have indicated a possible adverse effect when CHOLOXIN (sodium dextrothyroxine) is administered to a patient receiving a digitalis preparation. There may be an additive effect. This additive effect may possibly stimulate the myocardium excessively in patients with significant myocardial impairment. CHOLOXIN (sodium dextrothyroxine) dosage should not exceed 4 mg per day when the patient is receiving a digitalis preparation concomitantly. Careful monitoring of the total effect of both drugs is important.**

It has not been established whether the drug-induced lowering of serum cholesterol or lipid levels has a detrimental, beneficial, or no effect on the morbidity or mortality due to atherosclerosis or coronary heart disease. Several years will be required before current investigations will yield an answer to this question.

Contraindications
The administration of CHOLOXIN (sodium dextrothyroxine) to euthyroid patients with one or more of the following conditions is contraindicated

1. Known organic heart disease including angina pectoris, history of myocardial infarction, cardiac arrhythmia or tachycardia either active or in patients with demonstrated propensity for arrhythmias, rheumatic heart disease, history of congestive heart failure, and decompensated or borderline compensated cardiac status
2. Hypertensive states (other than mild labile systolic hypertension)
3. Advanced liver or kidney disease
4. Pregnancy
5. Nursing mothers
6. History of iodism

Warnings
CHOLOXIN (sodium dextrothyroxine) may potentiate the effects of anticoagulants on prothrombin time Reductions of anticoagulant dosage by as much as 30% have been required in some patients. Consequently, the dosage of anticoagulants should be reduced by one-third upon initiation of CHOLOXIN (sodium dextrothyroxine) therapy and the dosage subsequently readjusted on the basis of prothrombin time. The prothrombin time of patients receiving anticoagulant therapy concomitantly with CHOLOXIN (sodium dextrothyroxine) therapy should be observed as frequently as necessary, but at least weekly, during the first few weeks of treatment.

In the surgical patient, it is wise to consider withdrawal of the drug two weeks prior to surgery if the use of anticoagulants during surgery is contemplated

When CHOLOXIN (sodium dextrothyroxine) is used as thyroid replacement therapy in hypothyroid patients with concomitant coronary artery disease (especially those with a history of angina pectoris or myocardial infarction) or other cardiac disease treatment should be initiated with care Special consideration of the dosage schedule of CHOLOXIN (sodium dextrothyroxine) is required This drug may increase the oxygen requirements of the myocardium especially at high dosage levels Treated subjects with coronary artery disease must be seen at frequent intervals If aggravation of angina or increased myocardial ischemia cardiac failure, or clinically significant arrhythmia develops during the treatment of hypothyroid patients the dosage should be reduced or the drug discontinued

Special consideration must be given to the dosage of other thyroid medications used concomitantly with CHOLOXIN (sodium dextrothyroxine) As with all thyroactive drugs hypothyroid patients are more sensitive to a given dose of CHOLOXIN (sodium dextrothyroxine) than euthyroid patients

Epinephrine injection in patients with coronary artery disease may precipitate an episode of coronary insufficiency This condition may be enhanced in patients receiving thyroid analogues These phenomena should be kept in mind when catecholamine injections are required in sodium dextrothyroxine-treated patients with coronary artery disease

Since the possibility of precipitating cardiac arrhythmias during surgery may be greater in patients treated with thyroid hormones it may be wise to discontinue CHOLOXIN (sodium dextrothyroxine) in euthyroid patients at least two weeks prior to an elective operation During emergency surgery in euthyroid patients and in surgery in hypothyroid patients in whom it may not be advisable or possible to withdraw therapy, the patients should be carefully observed

There are reports that sodium dextrothyroxine in diabetic patients is capable of increasing blood sugar levels with a resultant increase in requirements of insulin or oral hypoglycemic agents Special attention should be paid to parameters necessary for good control of the diabetic state in dextrothyroxine-treated subjects and to dosage requirements of insulin or other antidiabetic drugs If sodium dextrothyroxine is later withdrawn from patients who required an increase of insulin (or oral hypoglycemic agents) dosage during its administration the dosage of antidiabetic drugs should be reduced and adjusted to maintain good control of the diabetic state

When either or both impaired liver or kidney function are present the advantages of CHOLOXIN (sodium dextrothyroxine) therapy must be weighed against the possibility of deleterious results

Usage in Women of Childbearing Age
Women of childbearing age with familial hypercholesterolemia or hyperlipemia should not be deprived of the use of this drug, it can be given to those patients exercising strict birth control procedures Since pregnancy may occur despite the use of birth control procedures admin istration of CHOLOXIN (sodium dextrothyroxine) to women of this age group should be undertaken only after weighing the possible risk to the fetus against the possible benefits to the mother Teratogenic studies in two animal species have resulted in no abnormalities in the offspring

Precautions
It is expected that patients on dextrothyroxine therapy will show greatly increased serum protein-bound-iodine levels These increased serum PBI values are evidence of absorption and transport of the drug and should NOT be interpreted as evidence of hypermetabolism, similarly they may not be used for titrating the effective dose of CHOLOXIN (sodium dextrothyroxine) PBI values in the range of 10 to 25 mcg% in treated patients are common

If signs or symptoms of iodism develop during CHOLOXIN (sodium dextrothyroxine) therapy the drug should be discontinued

A few children with familial hypercholesterolemia have been treated with CHOLOXIN (sodium dextrothyroxine) for periods of one year or longer with no adverse effects on growth However it is recommended that the drug be continued in patients in this age group only if a significant serum cholesterol-lowering effect is observed

Adverse Reactions
The side effects attributed to dextrothyroxine therapy are for the most part due to increased metabolism and may be minimized by following the recommended dosage schedule Adverse effects are least commonly seen in euthyroid patients with no signs or symptoms of organic heart disease the incidence of adverse effects is increased in hypothyroid patients and is highest in those patients with organic heart disease superimposed on the hypothyroid state

In the absence of known organic heart disease some cardiac changes may be precipitated during sodium dextrothyroxine therapy In addition to angina pectoris arrhythmia consisting of extrasystoles ectopic beats or supraventricular tachycardia ECG evidence of ischemic myocardial changes and increase in heart size have been observed Myocardial infarctions both fatal and non-fatal have occurred but these are not unexpected in untreated patients in the age groups studied It is not known whether any of these infarcts were drug related

Changes in clinical status that may be related to the metabolic action of the drug include the development of insomnia nervousness palpitations tremors, loss of weight lid lag sweating flushing hyperthermia hair loss diuresis and menstrual irregularities Gastrointestinal complaints during therapy have included dyspepsia nausea and vomiting constipation, diarrhea and decrease in appetite

Other side effects reported to be associated with CHOLOXIN (sodium dextrothyroxine) therapy include the development of headache, changes in libido (increase or decrease), hoarseness, tinnitus, dizziness, peripheral edema, malaise, tiredness visual disturbances, psychic changes, paresthesia, muscle pain, and various bizarre subjective complaints Skin rashes, including a few which appeared to be due to iodism, and itching have been attributed to dextrothyroxine by some investigators Gallstones have been discovered in occasional dextrothyroxine-treated patients and cholestatic jaundice has occurred in one patient although its relationship to CHOLOXIN (sodium dextrothyroxine) therapy was not established

In several instances, the previously existing conditions of the patient appeared to continue or progress during the administration of CHOLOXIN (sodium dextrothyroxine), a worsening of peripheral vascular disease sensorium, exophthalmos, and retinopathy have been reported

CHOLOXIN (sodium dextrothyroxine) potentiates the effects of anticoagulants such as warfarin or Dicumarol on prothrombin time, thus indicating a decrease in the dosage requirements of the anticoagulants On the other hand, dosage requirements of antidiabetic drugs have been reported to be increased during dextrothyroxine therapy (see WARNINGS section)

Dosage and Administration
For **adult** euthyroid hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is 4 to 8 mg per day The initial daily dose should be 1 to 2 mg to be increased in 1 to 2 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, if that dosage level is indicated to effect the desired lowering of serum cholesterol

When used as partial or complete substitution therapy for levothyroxine in hypothyroid patients with cardiac disease who cannot tolerate other types of thyroid medication, the initial daily dose should be 1 mg to be increased in 1 mg increments at intervals of not less than one month to a maximum level of 4 to 8 mg daily, preferably the lower dosage The maximum in patients receiving digitalis therapy is 4 mg

For **pediatric** hypercholesterolemic patients, the recommended maintenance dose of CHOLOXIN (sodium dextrothyroxine) is approximately 0 1 mg (100 mcg) per kilogram The initial daily dosage should be approximately 0 05 mg (50 mcg) per kilogram to be increased in up to 0 05 mg (50 mcg) per kilogram increments at monthly intervals The recommended maximal dose is 4 mg daily, if that dosage is indicated to effect the desired lowering of serum cholesterol

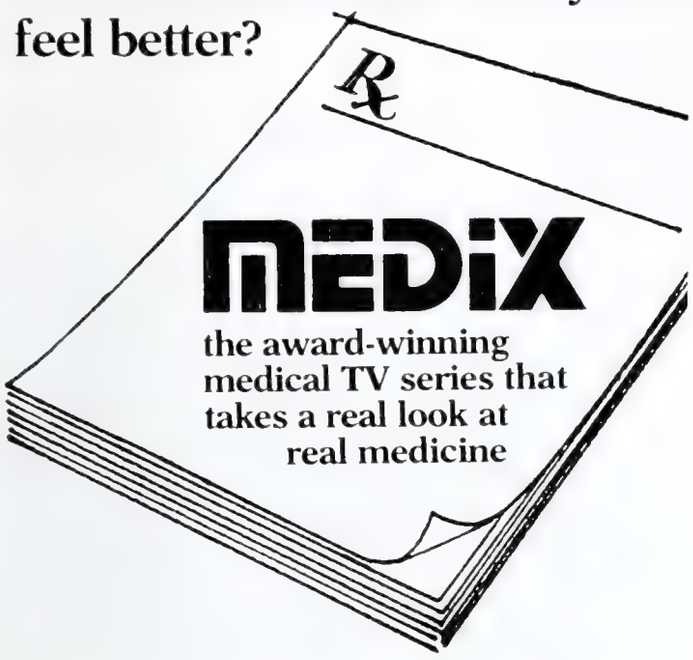
If new signs or symptoms of cardiac disease develop during the treatment period, the drug should be withdrawn

How Supplied
CHOLOXIN (sodium dextrothyroxine) is supplied in prescription packages of scored 1, 2, 4 and 6 mg tablets

March 1975

FLINT LABORATORIES
DIVISION OF TRAVENOL LABORATORIES, INC.
Deerfield, Illinois 60015

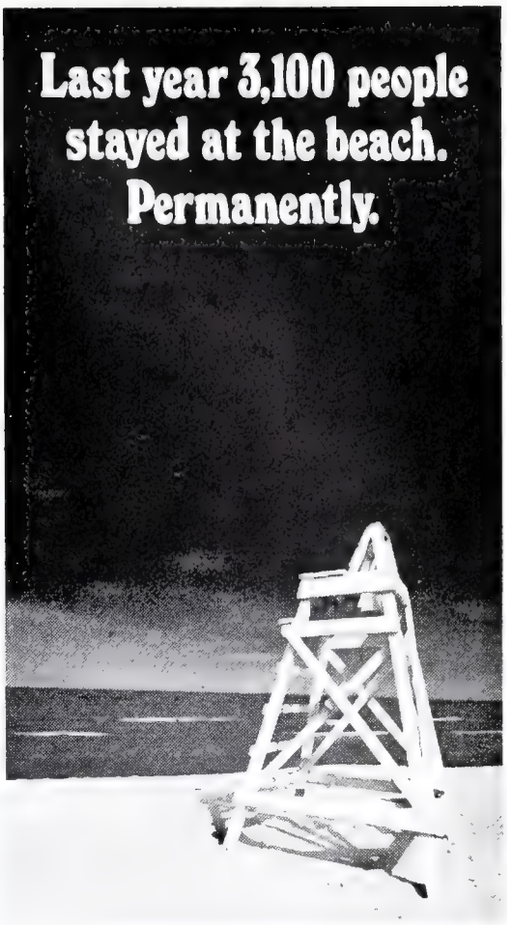
What can you recommend to your patients that's safe, effective, free from side effects...and makes everyone feel better?



consult local listing for time/channel

In a recent survey, 90% of patients said they would have annual checkups *if their physicians told them to do so.* This confirmed what we have long known—your key role, doctor, in motivating your patients to follow good health practices. We alert the public with facts about cancer. You follow through by urging regular checkups. A life-saving combination.

American Cancer Society



Of course they all drowned.

But then, another 55,600 Americans were killed in motor-vehicle accidents. And 17,600 died from falling. Fire claimed another 6,300 lives.

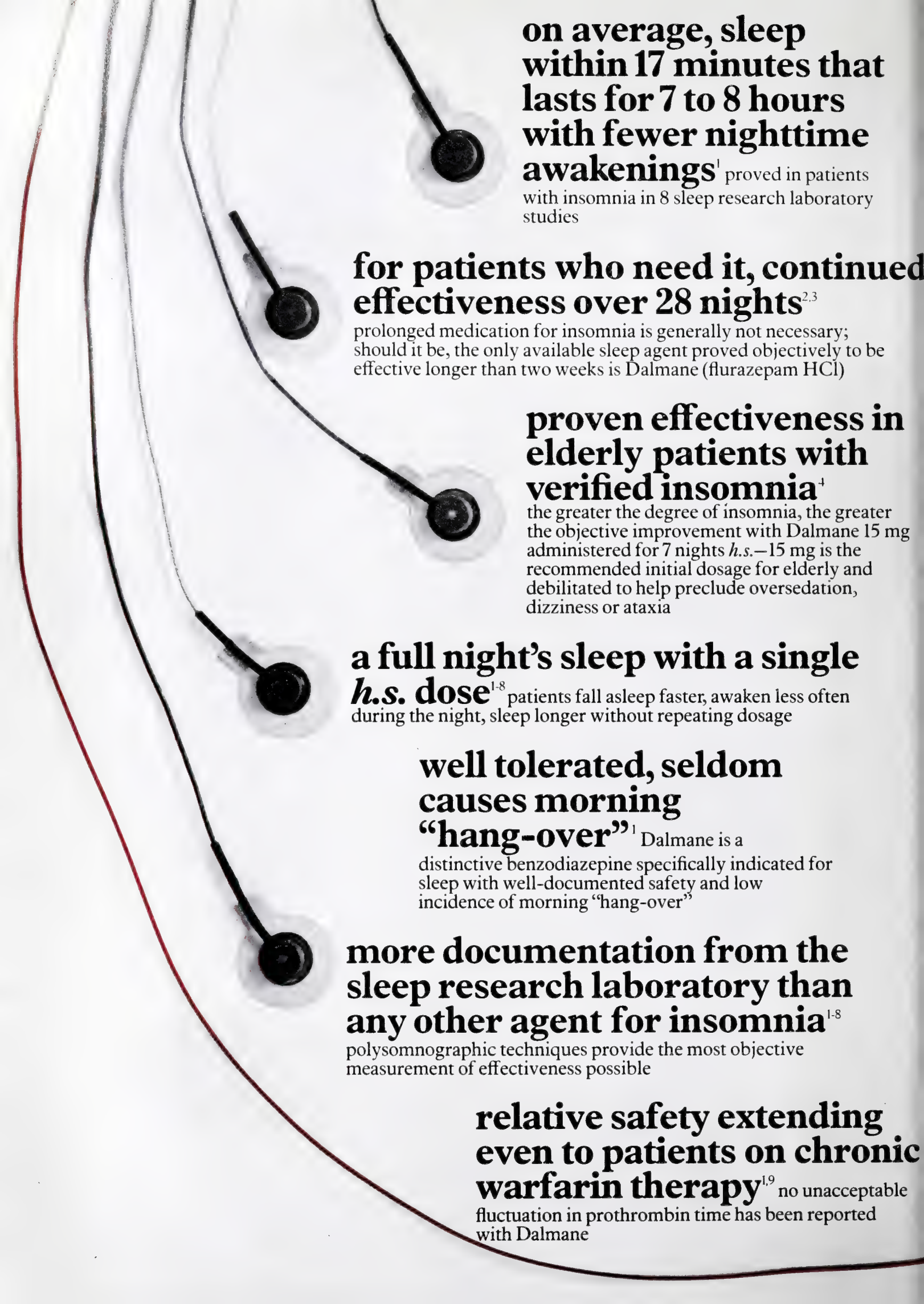
The figures go on and on. But maybe you get the point.

Don't let us hear about **you** by accident.

National Safety Council

If you don't like thinking about safety, think where you'd be without it.

A reminder from the National Safety Council. A non-profit, non-governmental public service organization. Our only goal is a safer America.



on average, sleep within 17 minutes that lasts for 7 to 8 hours with fewer nighttime awakenings[1] proved in patients with insomnia in 8 sleep research laboratory studies

for patients who need it, continued effectiveness over 28 nights[2,3]
prolonged medication for insomnia is generally not necessary; should it be, the only available sleep agent proved objectively to be effective longer than two weeks is Dalmane (flurazepam HCl)

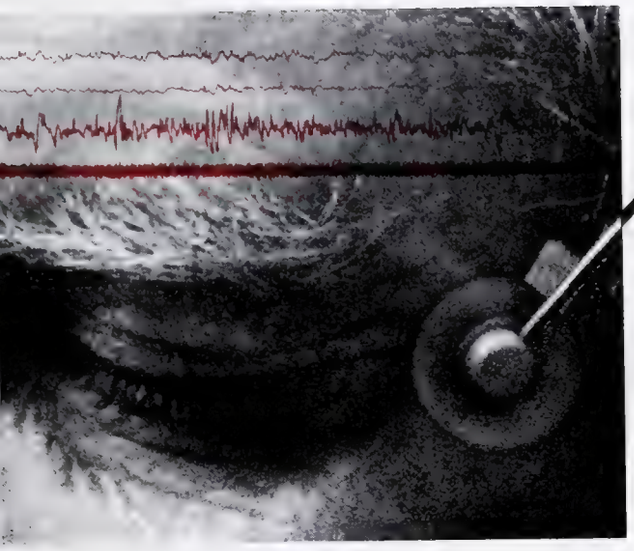
proven effectiveness in elderly patients with verified insomnia[4]
the greater the degree of insomnia, the greater the objective improvement with Dalmane 15 mg administered for 7 nights *h.s.*—15 mg is the recommended initial dosage for elderly and debilitated to help preclude oversedation, dizziness or ataxia

a full night's sleep with a single *h.s.* dose[1-8] patients fall asleep faster, awaken less often during the night, sleep longer without repeating dosage

well tolerated, seldom causes morning "hang-over"[1] Dalmane is a distinctive benzodiazepine specifically indicated for sleep with well-documented safety and low incidence of morning "hang-over"

more documentation from the sleep research laboratory than any other agent for insomnia[1-8]
polysomnographic techniques provide the most objective measurement of effectiveness possible

relative safety extending even to patients on chronic warfarin therapy[1,9] no unacceptable fluctuation in prothrombin time has been reported with Dalmane



The Dalmane® (flurazepam HCl) difference.

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Please see following page for a summary of product information.

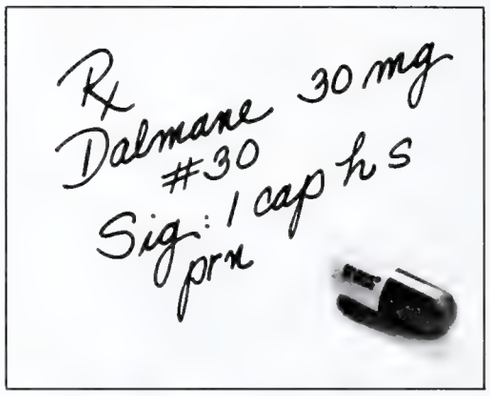
For relief of insomnia no other sleep medication has all the advantages of

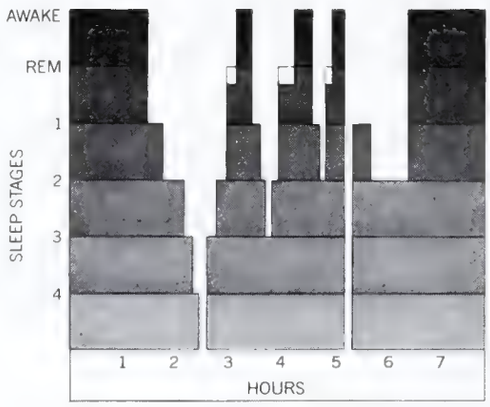
Dalmane®

(flurazepam HCl) C IV 30-mg and 15-mg capsules

Objectively proved in the sleep research laboratory:

- Sleep within 17 minutes, on average
- Sleep for 7 to 8 hours, on average
- Sleep with fewer nighttime awakenings
- Continued effectiveness over 28 nights of administration





Trouble Falling Asleep, Staying Asleep, Sleeping Long Enough

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

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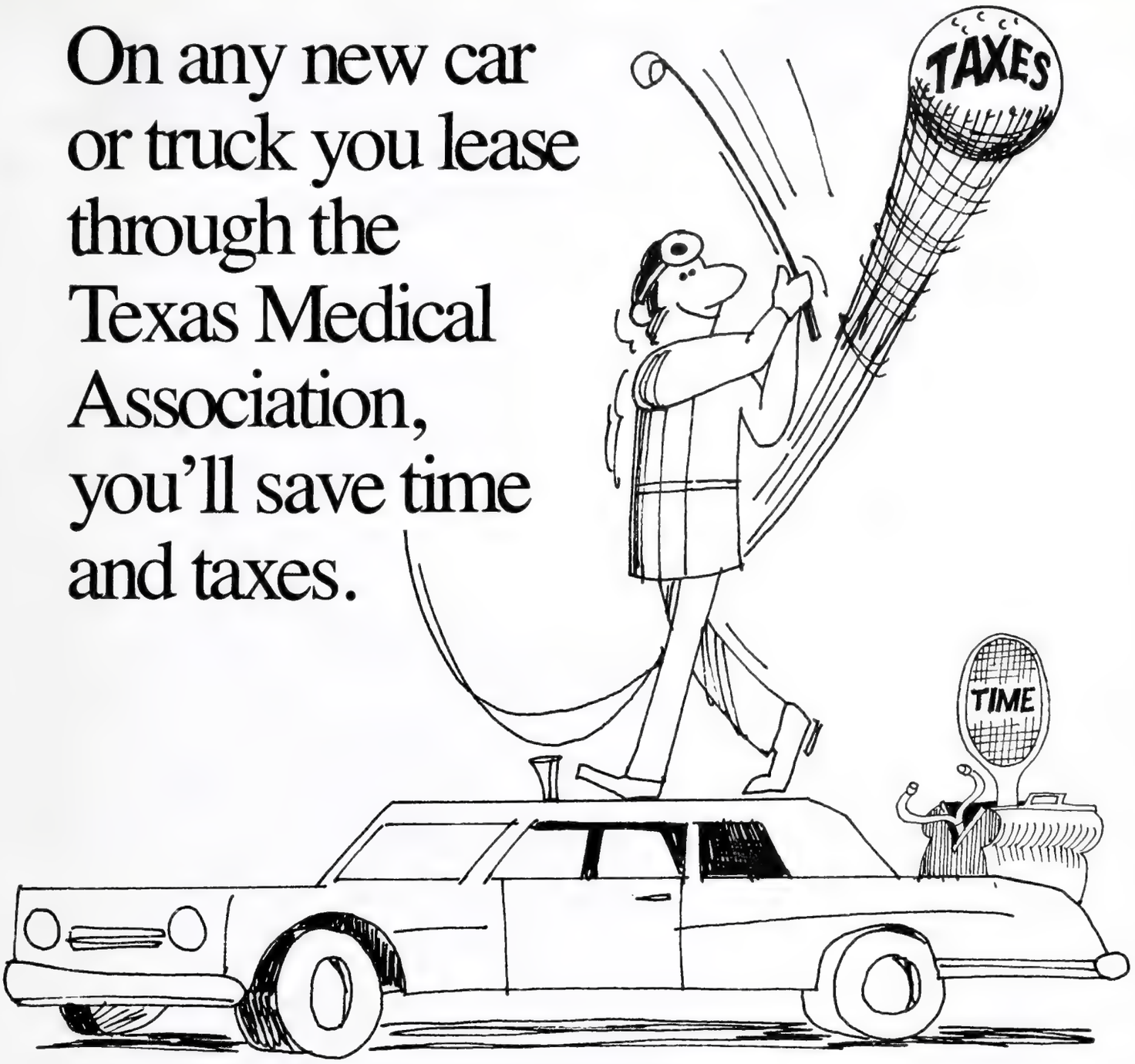
On any new car or truck you lease through the Texas Medical Association, you'll save time and taxes.



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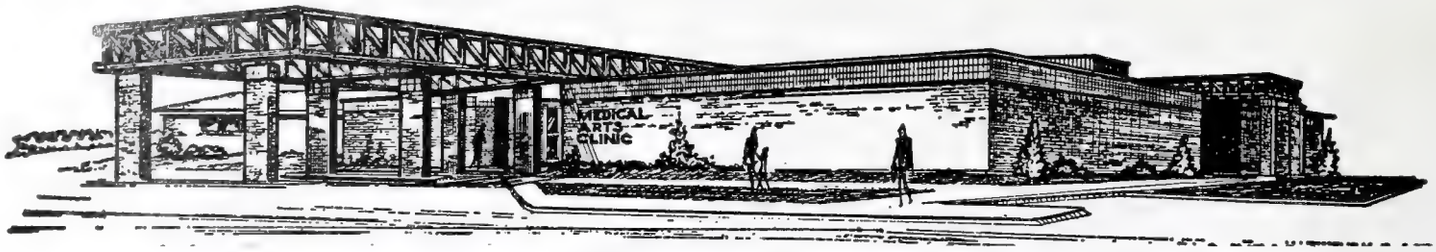

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GENERAL PRACTITIONER NEEDED: To work with general surgeon doing GP work. Excellent opportunity for a doctor desiring family practice work. May start for salary of $45,000 per year negotiable. City has population of 6,000 with trade area of 20,000 to 25,000. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

LOCUM TENENS WANTED: Doctor interested in GP work with OB. To cover one doctor on weekly, monthly or any time of the year basis. Financial arrangement negotiable. Contact Chris S. Cruzcosa, M.D., 800 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PATHOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: RADIOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL INTERNIST WANTED: Board certified or eligible to join expanding successful group. Busy hospital and office practice. Houston environs. Excellent salary and fringe benefits. Contact Doctors Clinic, 1501 Broadway, Galveston, Texas; attention Robert Walsh, Administrator.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

STUDENT HEALTH PHYSICIANS. Two physicians needed to help provide primary medical care for student population of 22,000. Stimulating environment, Medical School Ambulatory Clinic. Salary above $30,000; position includes clinical appointment in medical school. Call or write Reagan H. Gibbs, M.D., Texas Tech University Health Sciences Centers, Box 4049, Lubbock, Texas 79409; phone 806-742-3327.

MID-GULF COAST: INTERNIST with cardiology sub-specialty; family practitioner needed to practice in very progressive medium sized community on Gulf Coast. Excellent schools, churches with a friendly area population. New hospital with 60 beds under construction now. Excellent sports and recreation near by with hunting and salt and fresh water fishing. Plan guaranteed income for two years to acceptable people. Call 713-543-3367 or write P.O. Box 405, El Campo, Texas 77437.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

WANTED: PEDIATRICIAN to join a multispecialty group with two board pediatricians. Guaranteed salary $30,000 plus many fringe benefits. Contact F. L. Phillips, M.D., Glen Valley Clinic, 7630 Bellfort, Houston, Texas 77061.

TWO FAMILY PHYSICIANS, one preferably FP/surgeon, needed. 18 year old established practice open. Physician has retired leaving tremendous opportunity for physicians seeking practice in a small community with excellent schools, community spirit, climate and stable population. Near I-35, 15 miles from Waco and three large lakes. Fully equipped clinic. New 49 bed accredited hospital with excellent staff. Call collect, person to person: Gladys B. Wilson, Administrator, West Community Hospital, West, Texas; 817-826-5381, or Alvin R. Payne, President, Board of Directors, 817-826-5321.

OPPORTUNITY: City of 3,421; area of 16,800. Opportunity for IM to join group of two FPs. Office space available in clinic with FPs. Salary to start and partnership in year. Ophthalmology, ENT, and two FPs now in community. One hospital, 38 beds, open staff. 60 miles from Houston, 90 miles from Austin, 125 miles from San Antonio. County seat, good schools. Community income from oil and gravel industries, ranching and construction industries. Contact: C. I. Shult, M.D. or R. Cecil Marburger, M.D., Medical and Surgical Clinic, 1220 Bowie, Columbus, Texas 78934. Telephone: 713-732-2318.

TEXAS—NORTHEAST: EM Department physicians. Immediate opening available in established ACEP oriented group. Positions in four fine communities in Northeast Texas (population from 20K to 75K). All have the convenience of a large urban center nearby, yet offer a more stable, simple and serene lifestyle with many recreational and cultural opportunities. Prefer career oriented ED MD's. Additional training and/or experience required. Flexible schedule, fee-for-service with guarantee and usual fringes, including malpractice insurance. Write Emergency Medical Consultants, 3600 Gaston Avenue, Dallas, Texas 75246 or call 214-823-6850.

INTERNIST: 17-physician group in city of 70,000. Good starting salary, liberal fringe benefits including retirement plan. Associate status in one year. New hospital and clinic building under way. Contact John Murphy, Clinic Hospital Medical Associates, 224 West Beauregard, San Angelo, Texas 76901. 915-655-5761.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

WANTED: FAMILY PRACTITIONER AND INTERNIST to join established multispecialty clinic in downtown San Antonio. Laboratory and x-ray facilities on site. Compensation negotiable. Write or call collect L. B. Swayze, Administrator, Skinner Clinic, 124 Dallas Street, San Antonio, Texas 78205.

FAMILY PRACTITIONER TO JOIN a group of established FPs. One member is leaving as of June 1, 1976. His practice is totally available. Financial relationship open for discussion. Open staff hospitals. Excellent community with all available recreation. Three well established FPs needing fourth man. Contact Robert E. Chapman, M.D., 5808 East Belknap, Fort Worth, Texas 76117.

PHYSICIAN WANTED, INTERNIST to join growing multispecialty clinic in beautiful new building, adjoining the Medical Center. Excellent financial arrangements. All the benefits that only a group practice can provide. Contact: Sheldon W. Joseph, M.D., Medical Director, MacGregor Medical Clinic Associates, 8100 Greenbriar, Houston, Texas 77054, 713-797-1466.

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FAMILY PRACTITIONER NEEDED for Central Texas town; trade area 3,500 population. Moody—good area near Waco and Temple/Belton. New clinic available with x-ray and lab facilities. One physician in town; seeking dentist also. For additional information contact Mrs. McKay Rice, Sr., Moody, Texas, phone—office 853-2128, home 853-2011; or Garland Baker, Manager, Moody Chamber of Commerce, phone [illegible]165.

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CHIEF STAFF PHYSICIAN for large refinery and adjoining chemical plant in Texas Gulf Coast area. Qualified internist or occupational physician with Texas license. Physician will perform pre-employment and periodic physical examinations and handle occupational injuries and illnesses. Excellent benefits and starting salary commensurate with training and experience. Contact W. R. Karn, M.D., AMOCO Oil Co., 500 Jefferson Building, Houston, Texas 77002.

WANTED: OPHTHALMOLOGIST with retinal training to share excellent facilities with two other eye men. Near Gulf Coast, 90 miles from Houston. Unopposed in industrial area with over 125,000 population. Please reply to Ad-642, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

HOUSTON AREA PRACTICES. NASA, Kingwood, Sugar Creek and other beautiful suburbs. Excellent schools and hospitals nearby. Live in a beautiful home five minutes from your office. All types recreation except snow and ice sports. Primary care practices needed for rapidly growing Houston area. Some specialty practices also available. Please write with C. V. and preferences to Sanford Smith, Professional Practice Management, Inc., 1102 Kingwood Drive, Kingwood, Texas 77339.

LUBBOCK—INTERNIST TO ASSOCIATE in busy practice. Salary and/or guarantee leading to partnership in one-man corporation. Excellent facilities and modern well-equipped and staffed hospital nearby. Excellent climate and economy. Excellent public school system. Contact H. L. Shepard, M.D., 4809 University, Lubbock, Texas 79412; telephone 806-795-5561.

SIX FPs OR GPs NEEDED in town of 14,000 (30,000 draw). Financial help available. Office space available. Contact Thomas R. Ahrend, M.D., 1501 Hailey Street, Sweetwater, Texas 79556.

FAMILY PRACTICE OR OPHTHALMOLOGIST. Attractive office in ideal location with excellent public exposure on corner with easy access. 1370 square feet at 30c per square foot per month in an underserved middleclass area of Irving. Formerly occupied by internist. Contact Litt Perry, DDS, 209 South O'Conner, Irving, Texas 75060; 214-259-4580.

DALLAS METROPLEX. Immediate opening for full time emergency room physician in Dallas area hospital. Flexible shifts. 45-50K. Contact S. Powers, M.D., 2410 S. Voss, Suite G116, Houston, Texas 77057; 713-780-9991. Ref. to Ad D.

WANTED: GP OR FP. Potentially, lucrative practice, suburban area of about 20,000. Willing to negotiate. Paul A. Grandy, M.D., North Lamar Medical Clinic, 10805 North Lamar Blvd., Austin, Texas 78753; 512-837-2640.

PSYCHIATRIST BOARD CERTIFIED OR ELIGIBLE. $36,000 to $40,000. Texas license required. Building a better and more dynamic program in State Hospital. Ideal family living town of 30,000, good schools, recreation, mild weather. Maurice A. Watts, M.D., Clinical Director, Big Spring State Hospital, Box 231, Big Spring, Texas, 79720; 915-267-8216.

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MEDEX IS A MEDICAL PERSONNEL PLACEMENT SERVICE directed to the health care industry across the nation. We have listings for a corporate internist (major oil company), an OB/GYN for an HMO group and a clinic internist. All fees paid. Contact Mrs. Blaker, Medex, 5805 Richmond, Houston, Texas 77057; phone 713-789-1550.

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PHYSICIANS WANTED: Our client institutions and physicians require all disciplines for solo, associate and institutional practices in Texas. Excellent compensation package-participation. Call: C. Collum, 713-777-5261 or write Watkins & Associates, Executive Search Consultants, 6300 Hillcroft, Suite 509, Houston, Texas 77081.

PART-TIME MEDICAL ADVISOR, AUSTIN INDEPENDENT SCHOOL DISTRICT. Primary responsibility for providing medical consultation and selected medical services for the School Health Program. Salary $15,000 to $18,000, depending on experience and whether or not board certified. Mileage reimbursement—innovative program. Contact Mr. H. L. Gaines, 6100 Guadalupe Street, Austin, Texas 78752.

PHYSICIAN WANTED: FULL-TIME COLLEGE PHYSICIAN in liberal arts college of 1200 students to serve as: (1) physician in campus health center for students, faculty, and staff, (2) instructor in interdisciplinary courses, (3) director of comprehensive advising program for health care professions, and (4) liaison to cooperating physicians and professional schools in health sciences. Compensation (including benefits) approximately $40,000/year. Contact Dr. Dan Bedsole, Austin College, Sherman, Texas 75090 or telephone 214-892-9101. An equal opportunity employer.

WANTED: PEDIATRICIAN to join a multispecialty group with two board pediatricians. Guaranteed salary $30,000 plus many fringe benefits. Contact F. L. Phillips, M.D., Glen Valley Clinic, 7630 Bellfort, Houston, Texas 77061.

ORTHOPEDIC SURGEON, El Paso, Texas (population 410,000). Join ultra busy 43 year old orthopedist in 17 man multi-specialty group practice (only 1½ years old) with own hospital and attached large clinic building. Excellent year round sunny dry climate. Guaranteed minimum $50,000-$55,000 first year. Call collect between 2-6 p.m., David L. Lewis, M.D., 915-592-0201 or write David L. Lewis, M.D., 6201 El Risco Drive, El Paso, Texas 79912.

PHYSICIANS WANTED: Rapidly growing town of Pearsall, Texas, 55 miles south of San Antonio, needs GP/Surgeons. Large oil deposits recently discovered. Splendid opportunity! New furnished office available next to hospital, terms negotiable. Call collect or write: Phillip Degelia, Frio Hospital, 320 Berry Ranch Road, Pearsall, Texas 78061; 512-334-3617.

FAMILY PRACTICE AND GENERAL SURGEON NEEDED to practice with three physicians in Crosbyton, Texas. 47-bed hospital. New offices with no investment required. Small town with large rural area. For additional information contact Dale R. Rhoades, M.D., 710 West Main, Crosbyton, Texas 79322.

Situations Wanted

BOARD CERTIFIED, DYNAMIC, ECLECTIC, bi-lingual, 35 year old psychiatrist with ample experience in individual psychotherapy and institutional psychiatry and with excellent recommendations wishes to join partnership in the area of San Antonio, Texas. Please reply to Ad-616, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED DIAGNOSTIC RADIOLOGIST with extensive experience in neuro-radiology, vascular procedures and special procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join hospital based group with private office. Available after three months time. Please reply to Ad-622, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BLUE-CHIP PHYSICIAN ASSISTANT looking for position in Austin or Hill Country area. Two years experience, including surgery. Baylor graduate 1973, Houston, Texas. Please reply to Ad-627, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED OBSTETRICIAN AND GYNECOLOGIST with vast experience in all operative procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join group with private office. Available after three months time. Please reply to Ad-623, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SEEKING LOCATION: 36, board eligible, university trained neurosurgeon. Two years practice experience, microneurosurgery oriented. Licensed in Texas. Seek association, partner, group or solo practice. Available anytime. Please reply to Ad-635, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST: 30, ABIM, university trained. Texas license. Desire locum tenens. Army discharge February 1977. Begin civilian fellowship July 1977. Would like two or three months association with practicing internist or group in San Antonio beginning March 1977. Please reply to Ad-639, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON, FMG, 34, completed Part I ABS. Total 10 years surgical experience, some chest and vascular. Desires solo, group or associate practice in Texas or Southeastern states. Presently part-time ER. R. Shrivastav, M.D., 1100 West Jeffrey #69, Kankakee, Illinois 60901. 815-937-4169.

PEDIATRICIAN SEEKING LOCATION in Houston area. Married female pediatrician, FMG, university trained, board eligible. Desires position as partner or associate. Will also consider hospital appointment. Available July 1. For further information contact Ad-641, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN, 38, FMG, board certified. Licensed in Washington, FLEX Illinois. Five years of private practice experience in Illinois. Seeking opportunity for group practice in Texas. Telephone number 217-224-2919; office 217-224-3300; or write Ad-643, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, BOARD ELIGIBLE with many years of experience. Bilingual English-Spanish, presently in private practice in southern USA. Seeks association or solo practice. Prefers Southeastern Texas, other areas considered. Clear references. Please reply to Ad-644, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WE PRESENTLY HAVE SEVERAL PHYSICIANS, GPs and specialists on file who wish to practice in Texas on a salary basis, with a view to future partnership. How may we help? Medi-Search (recruiting physicians exclusively), 309 Wichita Title Building, Wichita Falls, Texas; 817-322-5269.

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OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building. 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18287, Dallas, Texas 75218.

OPTICAL COMPANY FOR SALE situated in metropolitan area with gross sales in excess of $225,000, incorporated and enjoys established clientele, glasses and contact lenses dispensed from several offices, personnel including management available to continue operations. Principals only please reply to Ad-597 *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

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FOR SALE: Family practice established in 1946, now large part is industrial medicine. I wish to leave this practice in the next two to three years. Please reply to Ad-621, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OFFICE SPACE FOR LEASE IN NORTHEAST HOUSTON. 2,268 square feet of office space to accommodate two or three physicians. Predominantly black area with few doctors. Adjacent to pharmacy. Office includes patient waiting room, two reception areas, two doctors offices, lab and x-ray. $200 per month per physician, plus utilities. For additional information contact JoAnne Beakley or Tom Kestler, Beakley Pharmacy, 10811 Homestead at Little York Road, Houston, 77016; phone 358-2031 or 633-2200.

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AUSTIN—NEW PROFESSIONAL PARK. Internist, GP, FP, Peds, OB/GYN sought to associate in group setting for solo practice. Physician population has not kept pace with accelerated growth. University town, new hospital. Call or write: Cannon Professional Park, c/o 3913 Medical Parkway, Austin, Texas 78756. Telephone 512-451-8489.

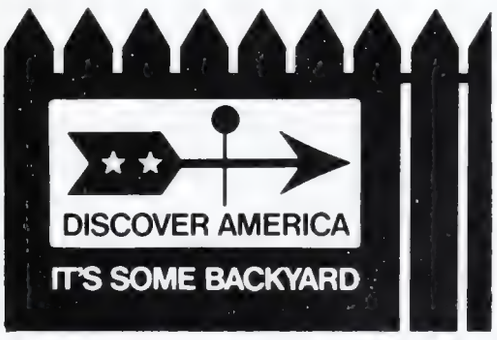
Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

BANK LOANS TO PHYSICIANS BY MAIL. We make unsecured loans from $4,000 to $10,000 at bank rates (tax deductible). Up to 60 months to repay. We'll process your application in a few days and upon approval, forward check by mail. For information, write: Professional Services Division, Texas Bank & Trust, P.O. Box 101, Jacksonville, Texas 75766. 214-586-2231. (Equipment leasing & financing, too. Write for free brochure.)

DISCRETIONARY FUNDS IDLE? Discover gems as a fascinating investment. "Gems—The Beautiful Investment" lists 10 reasons investors recognize gemstones' potential. "G-TBI" was reviewed by *Lapidary Journal* as "an excellent little book" that "should enlighten many to the possible returns . . . available in the precious gem market." Shrink-wrapped, soft-bound. $5 postpaid. RLK Productions, P.O. Box 12252, Dallas, Texas 75225.

WANTED TO RENT: Space in ophthalmologist's office to dispense glasses and contact lens. Please reply to Ad-646, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.



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Editorials

PALLIATION OR PREVENTION — TIME FOR A CHOICE

The specter of coronary heart disease has prompted a floodtide of palliative surgical procedures as well as programs for mobilizing civic forces to cope with the calamity of sudden death. Providing appropriate care for the thousands each day who have an acute myocardial infarction is an increasingly heavier financial burden.

Viewing this situation, one wonders if perhaps we are so preoccupied in these efforts that we are overlooking what is potentially the most important objective—the prevention of clinical disease. Indeed, it might be more fruitful to work on ways and means by which the potential candidate for myocardial infarction and sudden death can be identified with confidence.[1,2]

How are we to seek out these potential victims who have few, if any, symptoms and who have no apparent reason to see a physician? First, the medical profession must accept certain pertinent facts in regard to coronary heart disease: Its etiology is not mysterious, it begins in early life, it can be produced experimentally in other mammals, and it is related closely to the patient's environment and habits.[3] Unfortunately, there is not yet complete evidence that modification of recognized risk factors will prevent the development of coronary heart disease, but "Who can seriously argue with the general merit of a program that advocates maintenance of lean body weight, a less rich diet, physical fitness, giving up cigarettes, and control of hypertension, diabetes, and hyperlipidemia?"[4]

Most of us agree that there is no harm in advising a patient to follow a prudent diet and life style. The medical merit of such preventive measures may be forthcoming from a recently inaugurated national program to observe 12,000 male volunteers, who have multiple risk factors, during a six-year period of special intervention. This comprehensive effort, sponsored by the National Heart and Lung Institute, has been titled "MR. FIT," derived from Multiple Risk Factor Intervention Trial.

Public education programs have shown success in recent years; thousands of Americans stopped smoking cigarettes in response to television and press advertisements by various health-related organizations. Also, after an era of physical indolence, increasing numbers of our citizens are undertaking various exercise programs as a result of publications by some of our national health organizations.

Individual patient education is equally important. For example, the young father recovering from an acute myocardial infarction should be made aware that his children may be genetically destined to early death or disability from a similar disease, and that they should be examined for risk factors at an early age.[5] Intimal thickening of the coronary arteries may begin before birth in such susceptible children and preventive measures should begin in infancy.[6]

Until the results of the Multiple Risk Factor Intervention Trial are compiled, our efforts to modify risk factors must rest on empiricism. And what if the study fails to show promise in preventing myocardial infarction? As one authority aptly concluded, ". . . health planners may be reduced to a state of scientific bankruptcy."[5]

Some of us believe that this will not be the case, that an intervention program against the known risk factors is the proper and long overdue approach at this time, and that the results of the national trial will prove that acute coronary events can be prevented.

Jack M. Martt, MD, Temple.

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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

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Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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Fraud, abuse, and due process

These days the news media reports regularly the high cost—about $114 billion per year—of health and medical services in this country. Over $40 billion of the total goes to pay for government health programs, and in Washington, the watchword has become "containment of health care costs."

There are reports and allegations that some persons providing health care services have defrauded and abused these programs, and an intensified campaign is under way at the federal and state levels to identify and prosecute such persons. HEW's resources for investigation and detection are growing significantly. Medicaid is assembling a fraud and abuse unit of 108 people, as opposed to 5 currently employed, and a criminal investigation unit of 74 investigators.

I have no concern about the medical profession, because I know that 99 out of 100 physicians are honest and conscientious. Also, we are bound by a moral code, *The Principles of Medical Ethics,* which tells us: "The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession."

Further, concerning exposure of unethical conduct, "A physician should expose, without fear or favor, incompetent, corrupt, dishonest, or unethical conduct on the part of members of the profession."

On July 1 the AMA's House of Delegates adopted this statement: "The American Medical Association condemns and deplores all acts of fraud and wrongdoing, including in particular any wrongful acts as recently reported in the Medicaid and Medicare programs. We urge that responsible government agencies proceed with all due speed in the prosecution of all who are charged with guilt or fraudulent misconduct. We will continue to offer our cooperation and assistance in bringing to an end such activities."

Since it is not likely we will know about those alleged to have committed acts of fraud or abuse involving government health programs until charges are brought, let's make our position loud and clear: We will help weed out fraud and dishonesty of any within our profession, but at the same time we expect investigations to be fair and without prejudice, and to fulfill the legal and philosophical concepts of due process. We will cooperate with federal or state investigators upon their invitation or request.

In short, we physicians stand by our professional ideals and we do not fear fair and honest scrutiny. We will not shield, and we will cast out, those whose conduct has violated Medical Ethics.

L. S. Thompson, Jr., MD, President, Texas Medical Association.

Sept76 Texas Medicine

Effective use of psychotropic drugs

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Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido —all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

Usual Daily Dosage: Individualize for maximum beneficial effects. *Oral—Adults:* Mild and moderate anxiety and tension, 5 or 10 mg *t.i.d.* or *q.i.d.;* severe states, 20 or 25 mg *t.i.d.* or *q.i.d. Geriatric patients:* 5 mg *b.i.d.* to *q.i.d.* (See Precautions.)

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ON THE COVER

The original color photograph of the spider was taken by Dr. Owen Berg of Temple, whose artistry has won him highest acclaim as an amateur photographer (see story, page 104). The Kodalith copy with high contrast print used in preparing the cover was made by Mr. Edward E. Billeck, Acting Chief of Medical Media Production Service, Veterans Administration Center, Temple.

NEXT MONTH

In October, *Texas Medicine* will begin carrying monthly bibliographies on selected clinical topics of general interest; they will appear in the "Medicine in Literature" department, and will be prepared by the Memorial Library staff.

Scientific topics for articles next month will include sudden death, hypercalcemia, stressful doctor-patient relationships, court decisions influencing medical practice, and products liability for physicians.

"Approximately 95% of the [U.S.] children of ages 1-5 years had iron intakes below the standard"

U.S. Public Health Service (1974)

Where did that surprising statistic originate?

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For whites and blacks, for both sexes, for both income levels, the mean intake of iron (as a percent of the standard) for the 1-5 year age group ranged from 60 to 69%. Typically, then, 95 children out of 100 have iron intakes that are only ⅔ of the standard.

Whose iron intake standard were they using?

The standard set by the Food and Nutrition Board of the National Academy of Sciences for this group.

Implication of all this?

That iron deficiency among preschoolers is anything but rare and signs like mental apathy, lethargy, irritability, behavior problems, may be telegraphing iron deficiency.

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*B. Blackwell: The Drug Defaulter. *Clinical Pharmacology and Therapeutics* 13:841 (1972).

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NEWS

Prominent speakers to highlight TMA fall conference

Three prominent guest speakers have been secured for the Texas Medical Association's fall conference Sept 18 at the Joe C. Thompson Conference Center in Austin.

The speakers include Dr. James H. Sammons, executive vice president, American Medical Association; Sen Lloyd Bentsen of Texas; and Thomas F. Johnson, PhD, director of research for the American Enterprise Institute for Public Policy Research, Washington, D C. The conference will focus on current medical issues of both national and statewide significance including Medicare and Medicaid legislation, health manpower, implementation of professional standards review organizations, utilization review, health planning, swine influenza immunization, professional liability, and others.

An orientation program for provisional TMA members will be conducted in conjunction with the conference. Many TMA boards, councils and committees will also be meeting in Austin that weekend.

Health organizations readying for immunization program

Health organizations across the state of Texas have been building up to the massive effort required for a successful national influenza immunization campaign. The Texas Medical Association's Department of Communication has prepared information for physicians regarding the immunization. This information has been sent to all TMA members.

According to Dr. Fratis L. Duff, director of the Texas Department of Health Resources, the program is still "on schedule" in spite of uncertainties at the national level. The bivalent vaccine for the elderly and chronically ill will be available in early September. The second vaccine (monovalent) should be ready by mid-September.

The bivalent vaccine is a combination vaccine consisting of the A/New Jersey strain (swine flu) and the A/Victoria strain. This vaccine is intended only for persons over 65 years of age, or victims of chronic illnesses such as diabetes, kidney disease, emphysema, and so forth.

Although some questions have been raised as to the practicality and even the necessity of the mass flu immunization campaign, Dr. Duff feels such doubts are misplaced.

"If you would read the literature about the great influenza epidemic of 1918-1919, there would be no doubt in your mind," Dr. Duff said.

"Five hundred thousand people in the United States died, many of them within 24 hours after they got sick. Even the Asian flu epidemic of 1957-1958 was estimated to have killed about 70,000 people."
To further inform TMA members about various aspects of the immunization program, the TMA legal counsel has prepared a "Questions/Answers" column and an article on informed consent which appear on pages 104-106 of this journal.

At press time it was learned that Congress has passed The National Swine Flu Immunization Program of 1976. The bill protects physicians and pharmaceutical companies from direct liability in injuries resulting from administering the vaccine. According to the Aug 11 issue of the *Wall Street Journal*, "Doctors or medical workers who help give the free shots are regarded as 'program participants' . . . and thus are shielded from lawsuits . . . A Doctor who obtains free vaccine but charges for giving the shot isn't deemed a 'program participant' and thus isn't protected by the bill."

Executive Board endorses expansion of graduate training

The Texas Medical Association's Executive Board has endorsed the expansion of graduate training positions, in particular primary residencies, as the most rapid, effective, and efficient way to increase the numbers of well educated physicians to care for the citizens of Texas.
The policy stand was adopted by the TMA Executive Board in July. TMA will support state funding for new residency programs before the Texas Legislature in 1977, with the recommendation that the Coordinating Board, Texas College and University System, serve as the mechanism for distribution of funds. The Executive Board asked that its policy statement be forwarded immediately to the coordinating board.
The Executive Board also endorsed a report from The University of Texas System Task Force on Graduate Medical Education. According to the report, the goal for Texas should be development of 300 first-year positions in family medicine and 400 first-year positions in the three other primary care disciplines by 1982. The task force supports creation and further study directed toward developing residency programs in off-campus sites to be affiliated with the UT system.

NEWS

The TMA Council on Medical Education and Hospitals has requested information on graduate medical education programs and plans for expansion from other Texas medical institutions.

In the area of continuing education, the Executive Board approved a recommendation of the TMA Committee on Continuing Education that, should the House of Delegates choose to adopt a continuing education requirement for TMA membership, the association should accept a physician's report that he or she has fulfilled the continuing education requirement. The committee suggested that it might be feasible to initiate a program in 1978. The committee will submit its recommendation to the House of Delegates in November.

The board also received information that the Texas Institute for Medical Assessment has requested the Department of Health, Education, and Welfare to conduct a poll of Texas physicians regarding their preference on the establishment of a professional standards review organization in Texas. The board adopted a plan to inform physicians about the poll at the appropriate time. (See updated story, p 8).

In other actions, the Executive Board authorized a follow-up professional liability survey scheduled to reach physicians in early September. The three basic parts of the survey concern coverage, suit and claim experience in 1976, and information on the increased cost to the patient. Physicians are asked to return the survey as quickly as possible.

PSRO poll scheduled by HEW

In a notice published July 13 in the *Federal Register,* the Department of Health, Education and Welfare announced that it would undertake appropriate procedures to redesignate professional standards review organization areas in Texas. The department plans to conduct an informal secret ballot poll of all doctors of medicine or osteopathy engaged in active practice in Texas to ascertain whether they favor the designation of Texas PSRO areas on a local or statewide basis.

Review of the poll results by the secretary of DHEW could prompt administrative action designating a single area or multiple areas or a public hearing on area designation as was done in 1973. The poll is expected to be completed sometime this month.

If a single area is designated, the Texas Institute for Medical Assessment (TIMA) would apply for either a planning or conditional PSRO status. If multiple areas are designated, a binding statutory poll under the Bentsen Amendment would be requested. If a single area is designated, an additional one to three months of contract negotiation is likely.

Insurance coverage available to students

Medical students in The University of Texas System now may purchase malpractice insurance coverage through the existing policy that covers doctors, residents and interns.

V. E. Thompson, vice president for business and hospital affairs at the Galveston Medical Branch, reported that the UT System's professional liability insurance committee, of which he is chairman, has negotiated a proposed contract with the Hartford Insurance Group to provide malpractice coverage for medical students in amounts of $25,000 to $75,000. Students previously were not included in the policy.

The coverage, which will be added to the existing malpractice insurance policy, will require that the students pay an annual premium of $25.

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NEWS

Cancer education program to offer public information

A new cancer education program for the lay public offering current, factual information is being established in Texas and will be operational statewide by early 1977.

The Cancer Information Service is designed to help create a postive sense of awareness about cancer that will encourage the public to seek physician evaluation for early detection and prompt treatment of suspected malignancies.

To reinforce this philosophy and encourage followup, a list of resources on basic services available to the patient and his family in his community is being compiled. Included is information relating to services and assistance provided by physicians, hospitals, medical organizations, voluntary and governmental health agencies and others.

The CIS is a cooperative effort of M. D. Anderson Hospital and Tumor Institute and many organizations in Texas and is supported by funds from the National Cancer Institute. Similar projects are funded at the other 17 Comprehensive Cancer Centers to unite efforts of organizations, agencies, and various governmental level outlets involved in health education.

An important tool of the CIS program is a toll-free telephone number where Texans can obtain information on prevention, early detection, research, etc., and receive educational materials produced by many voluntary and governmental programs.

The phone service is manned by trained volunteer workers under supervision of the project's staff.

All policies and materials for dissemination are reviewed by a committee of clinicians and researchers at M. D. Anderson.

Callers seeking specific information for specific medical problems will be advised to discuss those problems with their personal physicians. Those seeking physicians will be referred to the appropriate county medical society.

Operational in a rural pilot area since late June, the CIS phone service will be introduced in the Houston area and surrounding counties during September. Although the service was promoted only in the pilot area, the project staff has accepted lay inquiries directed to M. D. Anderson in general since early this year. As of mid July over 350 calls and letters were processed from 50 Texas counties, 33 states, and two foreign countries. Analysis of data is currently being tabulated.

The Texas Medical Association Committee on Cancer has endorsed the project.

Hospital announces savings resulting from study

Austin's city owned Brackenridge Hospital has announced that it expects to improve the hospital's financial picture by savings of more than $2.7 million over a period of 15 months. The savings will result from the implementation of several recommendations coming from a study of the hospital's operations by the Texas Hospital Association Productivity Center.

Included in the interim report of the study were recommendations to reduce the number of hospital patient rooms by 17 (from 336 to 319); reduce personnel by 132 employees (from 1332 to 1200); and reduce patient room rates by $5 or $6 (from $80 to $75 for private, $76 to $70 for semi-private). The employee reduction will be made by normal attrition. Rates were reduced and the 17 rooms closed July 1.

The THA Productivity Center was established by a contract signed in August 1975 by the Department of Health, Education, and Welfare and THA. This two year contract in the amount of $1.8 million was 50% funded by DHEW and 50% by THA.

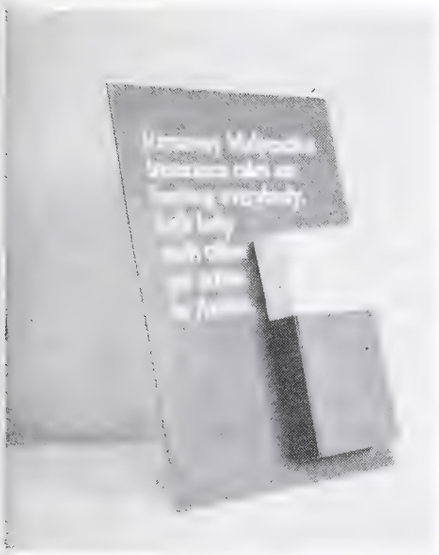
You can help inform the public on liability insurance problems

An informative new pamphlet from TMA can tell physicians' story of the malpractice insurance crisis quickly and easily. Communication with the public is vital if we are to overcome the crisis.

A sample copy of "No Texan can escape this epidemic" is enclosed so you can see what an effective communication tool the pamphlet can be.

Available free from TMA

You can put the pamphlet in statements, place it in waiting rooms and hospitals, distribute it at meetings. Utilize it in all sorts of situations.



Available free from TMA

An effective display card with pamphlet pocket also is available free of charge. This versatile tool uses professional looking gray and white graphics to attractively display pamphlets and its own message: "Runaway Malpractice Insurance rates are hurting everybody. Let's help each other get action in Austin."

You can fold out its attached easel for tabletop display or hang the 8½ x 11 inch card on a wall in a prominent place.

Use the easy order form below.

TO: Communication Department
Texas Medical Association
1801 North Lamar Blvd.
Austin, Texas 78701

Yes, I want to help tell people about the "malpractice insurance" crisis. Please send, free of charge:

_____ (No.) Pamphlets entitled "No Texan can escape this epidemic."

_____ (No.) Display cards—"Runaway Malpractice Insurance rates are hurting everybody. . ."

Send to: (print or type)

_____
(Name)

_____
(Address)

_____
(City, state, zip)

NEWS

New vaccine tested

A vaccine against serum hepatitis, a liver disease sometimes transmitted in blood transfusions, has been successfully tested in animals and is now ready for human trials, according to a research report in the June 28 issue of the *Journal of the American Medical Association.*

The vaccine is highly potent in inducing antibody formation against serum hepatitis in guinea pigs, monkeys, and chimpanzees after three injected doses, Eugene B. Buynak, PhD, and colleagues said. The report is from the Merck Institute for Therapeutic Research, West Point, Pa.

Tests of the vaccine for control of hepatitis B (serum hepatitis) in man are to be carried out, Dr. Buynak reported. The vaccine is made from a highly purified virus by treating with formaldehyde solution, and has been tested for safety and potency, he said.

"The results of the tests in the present study give promise for eventual control of hepatitis B by a highly purified viral antigen vaccine," Dr. Buynak declared.

Medicare/Medicaid anniversaries noted

Medicare and Medicaid became ten years old July 1.

Harry Schwartz, a member of the editorial board of the *New York Times,* noted the anniversary and commented that "the politicians are strangely bashful about pointing with pride or otherwise claiming credit." Writing in the June 29 *Times,* Schwartz said: "In retrospect, one of the most important consequences of Medicare and Medicaid has been to delay for many years adoption of comprehensive national health insurance in this country. By aiding the aged and the poor, the programs reduced the political pressure for an all-inclusive system. Simultaneously the huge problems Medicare and Medicaid created—especially in the area of costs—helped cool the ardor of many who might otherwise have been demanding a first priority for national health insurance."

He pointed out that health expenditures in fiscal 1965 were under $40 billion ($5 billion of it federal) but are expected to be $130 billion ($42.5 billion of it federal) in fiscal 1976.

"The enormous price inflation for all types of medical services—more than 80% this decade—is properly credited in large part to the explosion of effective demand which Medicare and Medicaid made possible," he writes. "Perhaps the great costs of this learning process are compensated for by the greater sophistication and skepticism with which all interests concerned approach today's proposals for more intimate relations between government and medicine."

HEW seeks comment on rules preventing discrimination of handicapped

The Department of Health, Education, and Welfare is seeking comment on proposed rules to prevent discrimination based on a handicap. The rules apply to programs benefiting from federal financial assistance. Deadline for receipt of comments is Sept 14, 1976.

The proposed rules are designed to implement a section in the 1973 Rehabilitation Act, which states that, "no otherwise qualified handicapped individual in the United States . . . shall solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance."

The proposed rules also could have impact on health, welfare, and other social service programs. The rules refer specifically to the availability of health services that are comparable

to those available to nonhandicapped persons.

According to Subpart F, "A recipient which provides health benefits or services shall ensure that these benefits or services are accessible to qualified handicapped persons through use of the methods set forth in Subpart C, including making house calls, referring patients, arranging to meet patients in accessible facilities, and modifying facilities."

The methods described in Subpart C include construction of new facilities, redesign of equipment, and alteration of existing facilities.

In determining the limits on travel to gain access to a federally-assisted health program, the department is considering the concept of the "catchment area," as used in the National Health Planning and Resources Act of 1974 (PL 93-641). If this standard is adopted, one method of compliance for local physicians and the state Medicaid program administrators would be to ensure that handicapped persons have access, within the health service area, to a range of Medicaid reimbursed services comparable to that available to the nonhandicapped.

Part 84 also proposes that communications describing health, welfare or other social services should be prepared in a manner understandable to persons with sensory or speaking handicaps.

"Accordingly, the Department solicits comment on the types of notices used and on the nature of the groups intended to be reached by these notices. Comments are also welcome concerning the possible burdens that would result from this requirement and concerning methods of reducing them," says the *Federal Register*.

Other issues on which the department seeks comment are the definitions of handicapped persons and recipient, the degree of specificity that is best suited to this regulation, time periods for compliance, financial burdens resulting from the requirements of the regulation, grievance procedures, employment practices, increasing accessibility or usability of a recipient's facilities, and requirements for nondiscrimination in recruitment and admission of students to postsecondary education programs and activities.

Comments should be mailed to the Director, Office for Civil Rights, Department of Health, Education, and Welfare, PO Box 1909, Washington, DC 20013.

Mammography proven effective in detection of cancer

The American College of Radiology's Commission on Cancer and Committee on Mammography and Diseases of the Breast have issued a policy statement that mammography has proven to be the most effective diagnostic tool so far developed for the detection of breast cancer at an early stage before it spreads to regional lymph nodes.

According to the statement, mammography at appropriate intervals in asymptomatic women over age 35 promises to reduce significantly the number of deaths from breast cancer. However, the statement indicated there is now no definitive scientific evidence with regard to optimal age for the initial mammogram, frequency of examination, and data on possible long term radiation risk and that it was issued as a summary of current informed opinion.

The statement includes six recommendations for screening for breast cancer in asymptomatic women. These are:

(1) All women should have annual physical examination of the breasts and be taught breast self-examination.

(2) For asymptomatic women the first, or baseline, mammographic examination should be performed between the ages of 35 and 40.

NEWS

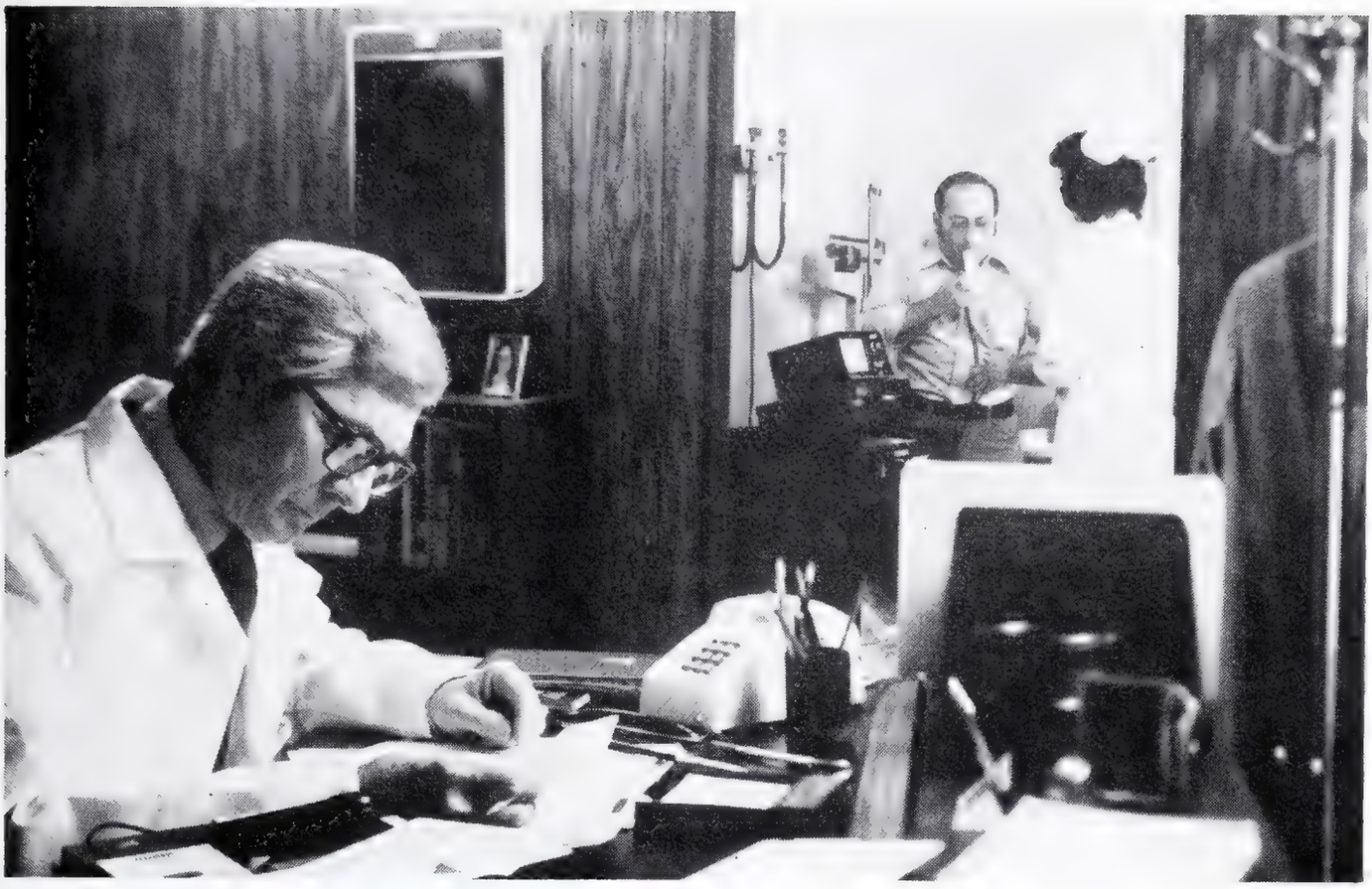
(3) Subsequent mammographic examinations should be performed at one to three year intervals unless more frequent examination is medically warranted.
(4) After age 50, annual or other regular interval examinations, including mammography, should be performed.
(5) Although the carcinogenic effects of radiation at current levels of exposure are probably immeasurably small, continuing attempts to reduce exposure should be made. However, image quality must be preserved for accurate diagnosis to insure the best risk/benefit (cure) ratio.
(6) Each radiologist should assure the periodic monitoring of his equipment and procedures to determine that the patient's exposure is being maintained at the lowest feasible level.

UT adopts procedure for selection of chief officers

A new procedure for selection of chief administrative officers of component institutions of The University of Texas System has been adopted by the Board of Regents.
When it is known that there is to be a vacancy in the office of a chief administrative officer of a component institution, an advisory committee with the chancellor as chairman, will be established to recommend candidates to the Board of Regents for final selection.
The advisory committee will be composed of the chancellor, deputy chancellor, three chief administrative officers, three regents, five faculty members of the institution involved (at least three of whom have the rank of associate professor or higher), one dean, two students from the institution involved, and the president of the ex-students' association of the campus involved or his designee. According to the new procedure, the committee will evaluate a candidate by criteria that relate to the needs of the individual component and shall seek advice on the ability of each candidate interviewed.
The committee will submit a panel of three to five candidates with no preference indicated to the Board of Regents. If none of the names submitted in the report is satisfactory to the regents, then the board may either name a new committee or proceed to select a chief administrative officer under other procedures which it deems appropriate.

Insurance trust broadened to encompass all plans

The Texas Medical Association Insurance Trust has been amended to encompass, in addition to TMA members' group life insurance, all other group insurance and retirement plans now offered by the TMA Insurance Department. The action came at the July 10 meeting of the TMA Board of Trustees.
In part, the change was made to facilitate the expansion of programs and service to members and to make present insurance programs more compatible with federal law (Employees Retirement Income Security Act of 1974 and related statutes).
Major input from involved TMA councils and committees on the structuring of members' insurance benefits, rates, and plans will continue, and the trustees of the insurance trust will be identical to those of the TMA Board of Trustees with the addition of two members, the chairmen of the Council on Medical Service and Insurance and the Committee on Association Insurance Programs.
Former employees of the TMA Insurance Department, now trust employees, will continue to render the same service to TMA members, and there will be no change in the present program. This reorganization will not affect current rates.



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NEWS

Leukemia society offering research scholarships

Post-doctoral grants are being offered by the Leukemia Society of America, Inc, for medical-scientific research in the fields of leukemia and allied diseases of the blood-forming organs.

Three types of grants are available for qualified investigators including a $100,000 five-year scholarship and two-year fellowships for $31,000 and $25,000. Letters of application for the grants should be addressed to Dr. Rose Ruth Ellison, Leukemia Society of America, Inc, 211 E 43rd St, New York, NY 10017. Deadline for filing completed applications is Oct 1.

UT regents approve budget

Educational and general funds totaling $436,221,030 have been allocated to The University of Texas System component institutions and System administration for the 1976-1977 fiscal year. The budget, approved by the UT System Board of Regents in July, includes $336,626,143 for the three health science centers, the Galveston Medical Branch, Sealy and Smith Foundation Hospitals, and the University Cancer Center.

A breakdown of the allocations includes: Dallas Health Science Center, $45,799,545; Galveston Medical Branch, $92,897,674; Sealy and Smith Foundation Hospitals, $8,805,327; Houston Health Science Center, $47,887,571; San Antonio Health Science Center $44,452,889; and University Cancer Center, $96,783,137.

Among notable increases in the San Antonio Health Science Center budget is $350,000 allotted for the family practice residency training program, up $190,000. The Dallas Health Science Center budget includes a 43% increase in library funding, a 57.1% increase in funds for continuing education, and a 73.7% increase in a special item for the Family Practice Training Program. Patient care activities at M. D. Anderson Hospital and Tumor Institute account for $35,378,662 of the educational and general funds budget, an increase of 38.7% from the Cancer Center's 1975-1976 budget figure. The hospital will be increasing in over-all size and patient capacity by more than 100%, with growth from a 300-bed hospital to a 600-bed hospital, an increase in the outpatient clinic from 600 to 1,200 patients per day, and in the radiation therapy center from 200 to 300 patients per day. Budget for the Medical Branch hospitals is up 19.2%, due in part to the opening of a new Child Health Center.

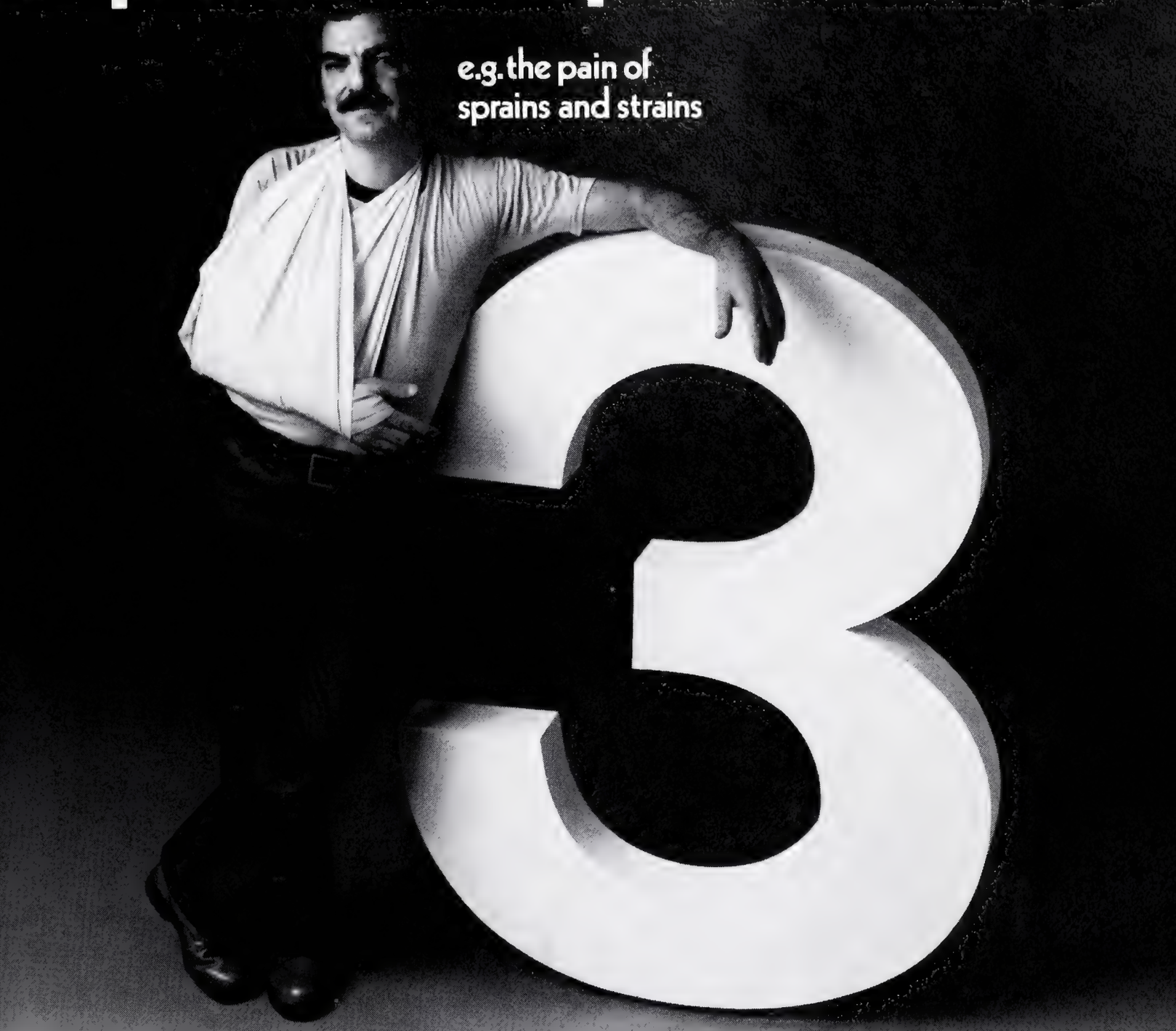
Nursing school funds were included by the regents in the budgets for UT Arlington, UT Austin, UT El Paso, the Galveston Medical Branch, Houston Health Science Center, and San Antonio Health Science Center.

PSRO condition for federal payments

According to a recent issue of *PSRO Letter,* the Bureau of Health Insurance (Medicare) has communicated to its regions that under the 1972 Social Security Amendments, professional standards review organization (PSRO) review is a condition of payment for Medicare claims and that instructions to that effect are being readied for distribution to fiscal intermediaries.

Hospitals in some areas have refused to enter into a relationship with a conditional PSRO operating in their respective areas for a variety of reasons ranging from disagreement on terms for delegation of review responsibilities or data system usage to serious personality conflicts. According to the *PSRO Letter,* the matter, while not widespread, has been the subject of increasing discussion between the Bureau of Quality Assurance and BHI.

No. 3
As potent as the pain it relieves.



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- unlike acetaminophen/codeine combinations, it does not sacrifice anti-inflammatory action

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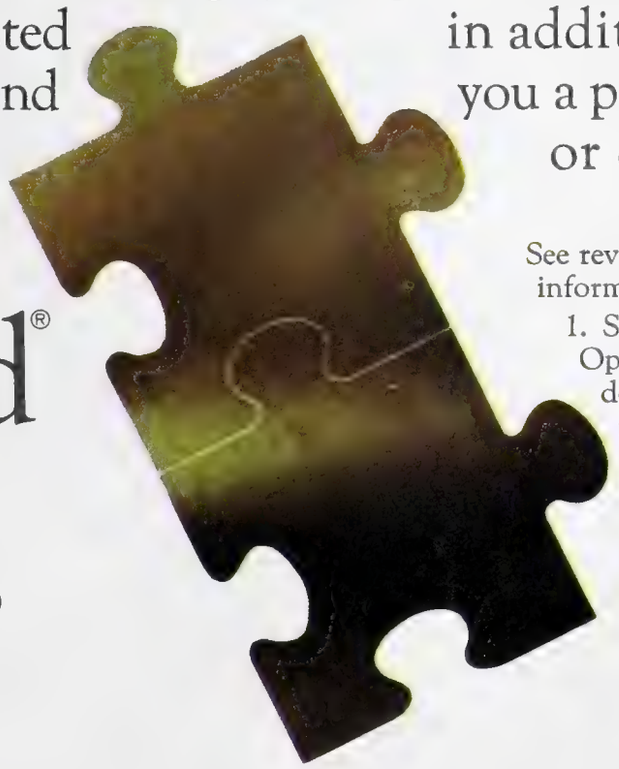
SYNTHROID medication is practical and economical for long-term therapy. A recent study of 44 hypothyroid patients indicates that 89 percent were maintained with doses of T4 (SYNTHROID) between 100 mcg. and 200 mcg. (0.1 mg. and 0.2 mg.) per day.[1]

If you're interested in additional information, we'd be pleased to send you a portfolio of pertinent clinical data. Write or contact your Flint representative.



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See reverse side for full prescribing information

1. Stock, J. M., Surks, M. I., and Oppenheimer, J. H. Replacement dosage of L-thyroxine in hypothyroidism. A re-evaluation. New Engl. J. Med. 290:529-33, 1974.

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DIVISION OF TRAVENOL LABORATORIES INC.
Deerfield, Illinois 60015

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Eliminates many of the uncertainties of desiccated thyroid therapy

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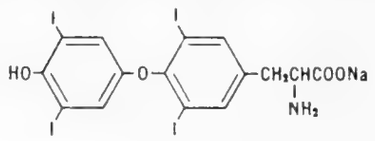
Deerfield, Illinois 60015

Synthroid Tablets—for oral administration
Synthroid for Injection—for parenteral administration

Description: SYNTHROID (sodium levothyroxine) **Tablets** and SYNTHROID **Injection** contain synthetic crystalline sodium levothyroxine (L-thyroxine) L-thyroxine is the principal hormone secreted by the normal thyroid gland



Sodium Levothyroxine

Actions: SYNTHROID (sodium levothyroxine) **Tablets,** taken orally, provide hormone that is readily absorbed from the gastrointestinal tract. SYNTHROID **Injection** is effective by any parenteral route. Following absorption, the synthetic L-thyroxine provided by SYNTHROID products cannot be distinguished from L-thyroxine that is endogenously secreted. Each is bound to the same serum proteins and each exhibits a six to seven day circulating half-life in the euthyroid individual

Both SYNTHROID products will provide L-thyroxine as a substrate for physiologic deiodination to L-triiodothyronine. Therefore, patients taking SYNTHROID products will demonstrate normal blood levels of L-triiodothyronine even when the thyroid gland has been surgically removed or destroyed by radioiodine. Administration of levothyroxine alone will result in complete physiologic thyroid replacement.

Indications: SYNTHROID (sodium levothyroxine) products serve as specific replacement therapy for reduced or absent thyroid function of any etiology. SYNTHROID **Injection** can be used intravenously whenever a rapid onset of effect is critical, and either intravenously or intramuscularly in hypothyroid patients whenever the oral route is precluded for long periods of time.

Contraindications: There are no absolute contraindications to SYNTHROID (sodium levothyroxine) therapy. Relative contraindications include acute myocardial infarction, uncorrected adrenal insufficiency and thyrotoxicosis. (See WARNINGS)

Warnings: Patients with cardiovascular diseases warrant particularly close attention during the restoration of normal thyroid function by any thyroid drug. In such cases, low initial dosage increased slowly by small increments is indicated. Occasionally, the cardiovascular capacity of the patient is so compromised that the metabolic demands of the normal thyroid state cannot be met. Clinical judgment will then dictate either a less-than-complete restoration of thyroid status or reduction in thyroid dosage.

Endocrine disorders such as diabetes mellitus, adrenal insufficiency (Addison's disease), hypopituitarism and diabetes insipidus are characterized by signs and symptoms which may be diminished in severity or obscured by hypothyroidism. SYNTHROID (sodium levothyroxine) therapy for such patients may aggravate the intensity of previously obscured symptoms and require appropriate adjustment of therapeutic measures directed at these concomitant disorders

Thyroid replacement may potentiate the effects of anticoagulants. Patients on anticoagulant therapy should have frequent prothrombin determinations when instituting thyroid replacement to gauge the need to reduce anticoagulant dosage

Precautions: Overdosage with any thyroid drug may produce the signs and symptoms of thyrotoxicosis, but resistance to such factitious thyrotoxicosis is the general rule. With SYNTHROID (sodium levothyroxine) **Tablets,** the relatively slow onset of action minimizes the risk of overdose but close observation in the weeks following institution of a dosage regimen is advised. Treatment of thyroid hyperactivity induced by oral medication is confined to interruption of therapy for a week, followed by reinstitution of daily therapy at an appropriately reduced dosage

Adverse reactions: Adverse reactions are due to overdose and are those of induced hyperthyroidism

Dosage and administration: For most adults, a final dosage of 100 mcg (0.1 mg) to 200 mcg (0.2 mg) of SYNTHROID (sodium levothyroxine) **Tablets** daily will restore normal thyroid function and only occasionally will patients require larger doses. Failure to respond adequately to a daily oral intake of 400 mcg (0.4 mg) or more is rare and should prompt reconsideration of the diagnosis of hypothyroidism, special investigation of the patient in terms of malabsorption of L-thyroxine from the gastrointestinal tract or poor adherence to therapy.

The concomitant appearance of other diseases, especially cardiovascular diseases, usually dictates a replacement regimen with initial doses smaller than 100 mcg/day (0.1 mg).

In otherwise healthy adults with relatively recent onset of hypothyroidism, full replacement dose of 150 mcg (0.15 mg) or 200 mcg (0.2 mg) has been instituted immediately without untoward effect and with good therapeutic response. General experience, however, favors a more cautious approach in view of the possible presence of subclinical disorders of the cardiovascular system or endocrinopathies.

The age and general physical condition of the patient as well as the severity and duration of hypothyroid symptoms determine the starting dosage and the rate of incremental dosage increase leading to a final maintenance dosage. In the elderly patient with long standing disease, evidence of myxedematous infiltration and symptomatic, functional or electrocardiographic evidence of cardiovascular dysfunction, the starting dose may be as little as 25 mcg (0.025 mg) per day. Further incremental increases of 25 mcg (0.025 mg) per day may be instituted at three to four week intervals depending on patient response. Conversely, otherwise healthy adults may be started at higher daily dosage and raised to the full replacement dosage in two to three weeks. Clearly it is the physician's judgment of the severity of the disease and close observation of patient response which determines the rate of dosage titration.

Laboratory tests to monitor thyroid replacement therapy are of limited value. Although measurement of normal blood levels of thyroxine in patients on replacement regimens frequently coincides with the clinical impression of normal thyroid status, higher than normal levels on oral replacement of levothyroxine occasionally occur and should not be considered evidence of overdosage per se.

In all cases, clinical impression of the well-being of the patient takes precedence over laboratory determination in determining the appropriate individual dosage.

In infants and children, there is a great urgency to achieve full thyroid replacement because of the critical importance of thyroid hormone in sustaining growth and maturation. Despite the smaller body size, the dosage needed to sustain a full rate of growth, development and general thriving is higher in the child than in the adult, as much as 300 mcg (0.3 mg) to 400 mcg (0.4 mg) per day.

In myxedema coma or stupor, without concomitant severe heart disease, 200 to 500 mcg of SYNTHROID **Injection** may be administered intravenously as a solution containing 100 mcg/ml. Although the patient may show evidence of increased responsivity within six to eight hours, full therapeutic effect may not be evident until the following day. An additional 100 to 300 mcg or more may be given on the second day if evidence of significant and progressive improvement has not occurred. Like the oral dosage form, SYNTHROID **Injection** produces a predictable increase in the circulating level of hormone with a long half-time. This usually precludes the need for multiple injections but continued daily administration of lesser amounts intravenously should be maintained until the patient is fully capable of accepting a daily oral dose.

In the presence of concomitant heart disease, the sudden administration of such large doses of L-thyroxine intravenously is clearly not without its cardiovascular risks. Under such circumstances, intravenous therapy should not be undertaken without weighing the alternative risks of the myxedema coma and the cardiovascular disease. Clinical judgment in this situation may dictate smaller intravenous doses of levothyroxine.

SYNTHROID **Injection** by intravenous or intramuscular routes can be substituted for the oral dosage form when ingestion of SYNTHROID **Tablets** is precluded for long periods of time.

How Supplied: SYNTHROID (sodium levothyroxine) **Tablets** are supplied as scored, color-coded compressed tablets in 6 concentrations: 25 mcg (0.025 mg)—orange . . . 50 mcg (0.05 mg)—white . . . 100 mcg (0.1 mg)—yellow . . . 150 mcg (0.15 mg)—blue . . . 200 mcg (0.2 mg)—pink . . . 300 mcg (0.3 mg)—green.

SYNTHROID (sodium levothyroxine) for **Injection** is supplied in 10 ml vials containing 500 mcg of lyophilized active ingredient and 10 mg of Mannitol, U.S.P. A separate 5 ml vial containing Sodium Chloride Injection, U.S.P. is provided as a diluent.

Directions for reconstitution: Reconstitute the lyophilized sodium levothyroxine by aseptically adding 5 ml of the Sodium Chloride Injection, U.S.P. to the vial. Shake vial to insure complete mixing. **Use immediately** after reconstitution. Discard any unused portion.

U.S. Pat. 2,889,363

January 1975

Signature requirements change for Medicare

Several changes in the signature requirements for Medicare claims have been issued.

According to a recent Medicare Part B newsletter, a physician's/supplier's signature is required on all claims, whether assigned or non-assigned, except when an itemized bill listing the services being billed and a letterhead indicating the name of the provider is attached.

Acceptable provider signatures include actual signature of provider; rubber stamp of provider; typewritten signature of provider; computer-billed signature of provider; signature of authorized employee; signature of physician/supplier, signed and initialed by an authorized employee; and itemized bill with physician/supplier letterhead.

There is a special condition for physicians billing under an emergency room association or group. The actual signature of the physician performing the service is required. An employee of the emergency room association may not sign on behalf of the physician.

Reference book published

The Commission on Professional and Hospital Activities has announced publication of the new edition of *Length of Stay in PAS Hospitals.*

The data in these books have been compiled from over 14 million individual patient discharge abstracts submitted by more than 2,000 of the U S and Canadian hospitals participating in the Professional Activity Study during 1975. These length of stay books display data for the United States, Canada, and each of the four U S census regions.

The membership in the Professional Activity Study, begun in 1953, now stands at over 2,200 hospitals in the United States and Canada in addition to a number of hospitals abroad.

Further information about the 1975 length of stay books is available from the commission, 1968 Gree Road, Ann Arbor, Mich 48105.

Public health school receives fellowship

The School of Public Health of The University of Texas Health Science Center at Houston, has been awarded an Eastman Kodak Fellowship in Occupational Medicine for the academic year 1976-1977.

According to Dr. Marcus M. Key, professor of occupational medicine at the school, the demand for physicians trained or board certified in occupational medicine has greatly increased since the passage of the Occupational Safety and Health Act of 1970. He said a wide variety of opportunities for practice are available, including industry at the plant and corporate levels, federal and state agencies, universities, and research laboratories.

Physicians interested in the residency training program at the School of Public Health should contact Dr. Key at (713) 792-4300 or Betsy Chadderdon at (713) 792-4311.

Membership cards not available

The TMA Membership Department has announced a decision that no 1976 membership cards will be distributed.

The decision came after the department received two shipments of cards which were not of acceptable quality.

Physicians who require documentation of their membership may request a letter of membership certification from the Membership Department, Texas Medical Association, 1801 N Lamar Blvd, Austin 78701.

A membership card is not required to gain admittance to TMA-sponsored meetings.

NEWS

Lawyers experiencing malpractice problems

Malpractice suits against lawyers are increasing nationwide and liability insurance rates have gone up 100% to 300% in each of the past two years.

The American Bar Association has established a task force to study the problem. Gerald Myers, an insurance agent who is also a member of the Chicago Bar Association, gave the *Chicago Sun-Times* these reasons for the increase in lawyers' malpractice cases: "People are lawsuit happy. If a person falls off a chair, he looks to see who manufactured it so he can sue the company . . . In the present social climate, there is much more willingness on the part of a lawyer to take a case against another lawyer. Life is getting more complicated."

Construction projects slated by UT health components

Actions on several major construction or remodeling projects at component institutions of The University of Texas System have been taken by the UT System Board of Regents.

The largest of the projects is at the San Antonio Health Science Center and involves a $13.5 million expansion of facilities to accommodate an entering class of 200 medical students.

For the UT System Cancer Center at Houston, the regents have approved final plans and authorized the advertisement for bids on remodeling of the Cancer Center's M. D. Anderson Hospital and Tumor Institute at an estimated total project cost of $12 million.

The regents also have given their approval to a construction contract totaling $1,894,800 for remodeling of the Edward H. Cary Basic Science Hall at the Dallas Health Science Center.

Directory deadline near

Texas Medicine has announced plans for its seventh annual *Texas Continuing Education Directory for Physicians.*

The directory will contain courses designed specifically for physicians and will be published in late December, 1976. In addition, the directory will carry a listing of medical meetings scheduled during the year.

Hospitals, schools, medical societies, and others wishing to have courses and meetings for physicians included in the 1976 directory should submit the information by Oct 1 to: *Texas Medicine,* 1801 N Lamar Blvd, Austin 78701.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 7/30/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+12.7%	−33.0%	− 6.2%	1.4%
Loomis-Sayles Mutual Fund	+ 8.3%	−21.0%	− 3.7%	3.2%
Mercantile Bank Equity Fund	+13.8%	−35.8%	−16.5%	3.4%
Mercantile Bank Fixed Income Fund	+ 3.2%	−13.5%	− 8.6%	7.8%
T Rowe Price Growth Stock Fund	+ 8.9%	−34.1%	− 1.9%	2.1%
T Rowe Price New Income Fund	+ 0.7%	N/A	N/A	8.0%
Stein Roe & Farnham Balanced Fund	+ 8.2%	−24.9%	+ 4.1%	3.1%
Standard & Poor 500 Stock Average	+14.7%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+15.5%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

WASHINGTON: TOWER INTRODUCES BILL TO REPEAL PLANNING LAW. Sen John Tower (R-Tex) has introduced S 3573 to repeal the National Health Planning and Resources Development Act of 1974, PL 93-641. He said the law had "odious ramifications, especially to nonmetropolitan communities and the health facilities and services in those areas."

AUSTIN: STUDY COMMISSION UPDATE. In July, the Texas Medical Professional Liability Study Commission held its 13th official meeting in Austin. Items of discussion included the joint underwriting association policy for Baylor College of Medicine interns and residents and problems which have been created in relationship to nurse anesthesiologists. In addition, upon recommendation by Dr. Don Webb of Houston, the commission tentatively voted to support a voluntary arbitration proposal which would be binding upon all parties 30 days after execution. Robert Witt, professor of insurance at The University of Texas, gave a status report of his study comparing the Texas experience to the national malpractice experience. The findings of the study will be presented at the next commission meeting. At its August meeting, the commission was to vote on such items as limitation of pain and suffering awards; limitation of damages; the collateral source rule; contingency fees; periodic versus lump-sum payments; itemized damages; patients' compensation board approach; and Subcommittee II's report with respect to the impact of the medical professional liability insurance crisis on the quality and availability of health care in Texas.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

CHICAGO: AMA BOARD ACTIONS. The American Medical Association's Board of Trustees has approved policy positions on many provisions of the Medicare-Medicaid Administrative and Reimbursement Reform Act as proposed by Sen Herman E. Talmadge (D-Ga), chairman of the Senate Finance Subcommittee on Health. Hearings on the controversial bill, S 3205, probably will be held sometime this year. After reviewing recommendations of the Council on Legislation, the board: (1) opposed creation of a new Health Care Facility, Health Care Financing Administration, which would split the responsibility for financing and health services and could compromise quality care under financial pressures; (2) opposed creation of a special HEW office on fraud and abuse and a separate inspector general (while recognizing the importance of eliminating fraud and abuse, the board pointed out that HEW already has investigative powers and has started a program without the need of special legislation); (3) supported provisions to determine Medicaid eligibility more promptly and to give more flexibility to survivors in obtaining payment for services to deceased beneficiaries; (4) supported provisions which would give more flexibility to the course of treatment for patients in skilled nursing facilities; (5) supported a provision providing that Medicaid notices of services furnished be sent to a sample group rather than to all Medicaid recipients of services; (6) opposed provisions that would add criteria for determining physicians' reasonable charges, eventually resulting in equalizing charge levels throughout the state and curtailing appropriate fee increases; (7) opposed a provision denying to physicians the current option of billing Medicare patients through assignments or by the direct method; (8) opposed a provision introducing a new criterion on physician reimbursement (the board

said reimbursement under Medicare should be for services recognized as medical practice within a state and not subject to added federal criteria); (9) opposed a provision limiting payment of pathologists to levels determined by HEW; (10) opposed a provision revising the Medicaid law to make physician reimbursement for services provided outside the hospital no less than 80% of the Medicare reasonable charge (the provision is in conflict with recommendations for usual, customary or reasonable fees and is based on a discriminatory Medicare formula, the board said); and (11) opposed a provision that would prohibit payment to physicians or others if an assignment were made to a third party (the board said this provision interferes in the contractual rights of physicians and others).

AUSTIN: HSA APPLICATIONS: On July 20, Gov Dolph Briscoe completed his recommendations to the secretary of DHEW with respect to recommendations for conditional designation of the remaining health systems agencies (HSAs) during the current review cycle in Texas. The governor recommended that the following applicants should receive conditional designation for the appropriate health service areas: Panhandle Regional Planning Commission for Area 1; West Texas Council of Governments for Area 3; Tri-regional Health System Agency for Area 4; North Texas Health System Agency for Area 5; Central Texas Health System Agency for Area 6; Northeast Texas Health System Agency for Area 7; South Texas Health System Agency for Area 8; Camino Real Health System Agency for Area 9; and Houston-Galveston Area Council for Area 10. The recommendations conditioned on certain additional items being done as recommended by the Texas Coordinating Commission on State Health and Welfare Services.

WASHINGTON: CLOSED-CLAIMS SURVEY. The National Association of Insurance Commissioners (NAIC) has released the second of four volumes of its closed-claims survey on medical injury cases. The second volume contains data based on some 9,500 closed claims submitted to the NAIC between July 1, 1975 and February 3, 1976. According to the survey, the ten leading states in terms of numbers of medical injury allegations made are (in descending order) California, New York, Pennsylvania, Illinois, Florida, Michigan, Ohio, Texas, Maryland, and Alabama. Hospitals were cited as either defendants or codefendants in 39% of the closed-claims, and were liable for 29% of the total indemnity dollars paid. In addition, hospital-based incidents accounted for 80% of the closed-claims and for 84% of the awarded damages. Of the categories referred to in the survey, on a purely numerical basis, physicians who perform minor surgery appear to stand the greatest risk of having a medical injury allegation made against them. Eighteen percent of the closed claims were of this type. In terms of those specialties who generate the greatest volume of claims in relationship to their proportion of the total number of specialties, the data indicates that the greatest volumes were generated by anesthesiologists, cardiac surgeons, and neurosurgeons.

AUSTIN: PLANNING AGENCY RECEIVES GRANT. In July the Bureau of State Health Planning and Resources Development of the Texas Department of Health Resources celebrated its first anniversary and received approval of its federal funding grant application. With approval of the grant, the bureau can begin officially as the federally designated state health planning and development agency to fulfill its health planning function as mandated under the PL 93-641.

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***Indications:** Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indication as follows:
"Possibly" effective: When taken by the oral route, Isordil is indicated for the relief of angina pectoris (pain of coronary artery disease). It is not intended to abort the acute anginal episode, but is widely regarded as useful in the prophylactic treatment of angina pectoris.
Final classification of the less-than-effective indications requires further investigation.

Contraindication: Idiosyncrasy to this drug.

Warnings: Data supporting the use of nitrites during the early days of the acute phase of myocardial infarction (the period during which clinical and laboratory findings are unstable) are insufficient to establish safety.

Precautions: Tolerance to this drug and cross-tolerance to other nitrites and nitrates may occur.

Adverse Reactions: Cutaneous vasodilation with flushing. Headache is common and may be severe and persistent. Transient episodes of dizziness and weakness as well as other signs of cerebral ischemia associated with postural hypotension may occasionally develop. This drug can act as a physiological antagonist to norepinephrine, acetylcholine, histamine, and many other agents. An occasional individual exhibits marked sensitivity to the hypotensive effects of nitrite, and severe responses (nausea, vomiting, weakness, restlessness, pallor, perspiration and collapse) can occur even with the usual therapeutic dose. Alcohol may enhance this effect. Drug rash and/or exfoliative dermatitis may occasionally occur.

Consult direction circular before prescribing.

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CONTINUING EDUCATION COURSES

SEPTEMBER

Basic Sciences: Microbiology & Immunology

Title: Anaerobic Microbiology Workshop
Sponsors: A Webb Roberts Center for Continuing Education in the Health Sciences, Dallas; Virginia Polytechnic Institute and State University, Division of Anaerobic Microbiology
Location of Course: Beasley Auditorium, Baylor University Medical Center; UT Health Science Center at Dallas
Dates: Sep 17-19, 1976
Fee: Lectures only, $20; Lectures and lab session, $50
Credit: 14 hours, Category I, AMA Physician's Recognition Award
Contact: A Webb Roberts Center for Continuing Education, Baylor University Medical Center, 3500 Gaston Ave, Dallas 75246

Family Medicine

Title: Family Practice Recertification Review
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Sep 10-12, 1976
Duration: Continuous, 3 days, 6 hours instruction per day, 18 total course hours
Fee: To be determined
Designed For: General practitioners
Enrollment: Minimum, 25; Maximum, 100
Credit: 18 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, open question
Contact: Office of Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Office Gynecology
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Sep 18-19, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 10 total course hours
Fee: $75
Designed For: General practitioners; Specialists in Gynecology
Enrollment: Maximum, 110
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, open question
Contact: Office of Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Seventh Family Medicine Review
Location of Course: University of Kentucky Medical Center, Lexington, Ky
Dates: Sep 26-Oct 2, 1976; Repeated Oct 17-23, 1976
Fee: $295
Contact: Dr. Frank R Lemon, Continuing Education, College of Medicine, University of Kentucky, Lexington, Ky 40506

Title: Advances in Clinical Medicine
Sponsor: Faculty, UT Southwestern Medical School, Dallas
Location of Course: Gooch Auditorium, UT Health Science Center at Dallas
Dates: Sep 27-30, 1976
Fee: $250; $100 for Residents, Fellows with letter from Head of Department
Credit: 24 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, patient demonstration, syllabus provided, participation in teaching rounds and outpatient clinics
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

General Medicine

Title: Blackford Memorial Lectures
Sponsor: Memorial Hospital of Denison
Date: Sep 11, 1976
Duration: 1 day
Fee: None
Designed For: General practioners; Specialists
Enrollment: Maximum, 100
Credit: AAFP
Teaching Methods: Audiovisual materials, clinical conference, lecture, live clinic, open question, panel, patient demonstration, seminar, television
Contact: Mike Mayes, Executive Director, Memorial Hospital of Denison, 1000 Memorial Dr, Denison 75020

Obstetrics & Gynecology

Title: Great Debates in Gynecological Endocrinology and Infertility
Sponsor: Baylor College of Medicine, Houston
Location of Course: Texas Medical Center, Houston
Dates: Sep 16-18, 1976
Duration: Continuous, 3 days
Fee: To be determined
Designed For: Specialists
Credit: Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Fred M Taylor, Director, Office of Continuing Education, Baylor College of Medicine, 1200 Moursund Ave, Houston 77025

Psychiatry

Title: Colloquium in Psychoanalytic Psychotherapy
Sponsor: UT Health Science Center at San Antonio

Location of Course: UT Health Science Center at San Antonio
Dates: Sep 18-19, 1976
Duration: Continuous, 2 days, 5 hours instruction per day
Fee: $75
Designed For: Specialists in Psychiatry
Credit: 10 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Office of Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Other: Psychology

Title: MMPI Workshop
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Date: Sep 25, 1976
Duration: Continuous, 1 day, 7 total course hours
Fee: $65
Designed For: General practitioners; Psychologists; School counselors
Enrollment: Maximum, 60
Credit: 18 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Lecture, open question
Contact: Office of Continuing Education Services, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Other

Title: Computerized Tomography of the Neuroaxis
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT Medical School at Houston
Location of Course: UT Medical School at Houston
Dates: Sep 17-18, 1976
Fee: $25; No fee for Residents, Interns, Fellows
Contact: UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

OCTOBER

Basic Sciences: Microbiology & Immunology

Title: Third Texas Medical Center Symposium on Infectious Disease and Microbiology
Sponsor: Office of Continuing Education, Baylor College of Medicine
Location of Course: Jesse Jones Auditorium, Houston
Date: Oct 21, 1976
Fee: $25 (Approximate)
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Gastroenterology

Title: Refresher Course in Gastrointestinal Radiology
Sponsors: Department of Radiology, UT Health Science Center at Dallas; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: Fairmont Hotel, Dallas
Dates: Oct 29-31, 1976
Credit: 18 hours, Category I, AMA Physician's Recognition Award
Contact: Dr. Robert N Berk, Department of Radiology, Parkland Memorial Hospital, 5201 Harry Hines Blvd, Dallas 75235

Ophthalmology

Cancelled: Genetics in Ophthalmology Symposium, UT Medical School at Houston, Program in Ophthalmology, October, 1976

Psychiatry

Title: Film Festival: Culture in Psychiatry—Great Britain (Freedom and Responsibility)
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Oct 22-24, 1976
Duration: Continuous, 3 days, 7 hours instruction per day
Fee: $10
Designed For: General practitioners; Specialists in Psychiatry
Credit: 20 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Psychiatry in Medical Practice
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT Medical School at Houston
Location of Course: UT Health Science Center at Houston
Dates: Oct 27-Dec 15, 1976
Duration: Intermittent, 1 day per week, 8 weeks, 2 hours instruction per day, 14 total course hours
Fee: $50
Designed For: General practitioners
Enrollment: Maximum, 30
Credit: 14 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

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Indications: Carisoprodol is indicated as an adjunct to rest, physical therapy, and other measures for the relief of discomfort associated with acute, painful musculoskeletal conditions.

Contraindications: Acute intermittent porphyria and allergic or idiosyncratic reactions to carisoprodol or related compounds such as meprobamate, mebutamate, tybamate

Warnings: *Idiosyncratic Reactions:* Rarely, extreme weakness, transient quadriplegia, dizziness, ataxia, temporary vision loss, diplopia, mydriasis, dysarthria, agitation, euphoria, confusion and disorientation have appeared within minutes or hours of the first dose. These usually subside in several hours but supportive and symptomatic therapy, including hospitalization, may be necessary.
Pregnancy and Lactation: Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers (concentrations in breast milk are two to four times that in plasma), or women of childbearing potential.
Children Under Twelve. Not recommended.
Potentially Hazardous Tasks: Driving a motor vehicle or operating machinery.
Additive Effects: Effects of carisoprodol and alcohol, other CNS depressants or psychotropic drugs may be additive.
Drug Dependence: Use cautiously in addiction-prone patients.

Precautions: To avoid excess accumulation, use caution in patients with compromised liver or kidney function.

Adverse Reactions: *Central Nervous System:* Drowsiness, dizziness, vertigo, ataxia, tremor, agitation, irritability, headache, depressive reactions, syncope, insomnia, idiosyncratic reaction (see "Warnings").
Allergic or Idiosyncratic: In previously unexposed patients, these are usually seen after 1–4 doses and include rash, erythema multiforme, pruritus, eosinophilia, fixed drug eruption with cross reaction to meprobamate. Asthmatic episodes, fever, weakness, dizziness, angioneurotic edema, smarting eyes, hypotension and anaphylactoid shock may be manifestations of severe reactions. In such cases, stop carisoprodol and initiate appropriate treatment (e.g., epinephrine, antihistamines, corticosteroids).
Cardiovascular: Tachycardia, postural hypotension, facial flushing.
Gastrointestinal: Nausea, vomiting, hiccup, epigastric distress.
Hematologic: Leukopenia and pancytopenia (on carisoprodol plus other drugs).

Usual Adult Dosage: One 350 mg tablet three times daily and at bedtime.

Overdosage: Has produced stupor, coma, shock, respiratory depression, and, very rarely, death. The effects of an overdosage of carisoprodol and alcohol or other CNS depressants or psychotropic agents can be additive even when one of the drugs has been taken in the usual recommended dosage. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Carisoprodol is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully with related drug meprobamate. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

Before prescribing, consult package circular or latest PDR information.

1. Hindle, T.H. III: Calif. Med. *117:7* (Aug.) 1972. 2,3. Unpublished Data on file, Medical Department, Wallace Laboratories, Cranbury, N.J.

COMING MEETINGS

TEXAS MEDICAL ASSOCIATION

Texas Medical Association's 1976 Update on Medical Issues will take place Saturday, Sept 18, at the Joe C Thompson Conference Center in Austin. Registration begins at 8:30 am. Dr. James H Sammons, executive vice-president of the American Medical Association, will speak on national issues of concern to physicians, and the Honorable Lloyd Bentsen, Jr, Houston, US Senator from Texas, will present a review of medical issues before the Congress. The program also features Dr. Philip W Mallory, Austin, deputy commissioner, Texas Department of Health Resources; Dr. Joseph T Painter, Houston, president, Texas Institute for Medical Assessment; Dr. John P Coughlin, San Angelo, TMA Committee on Health Planning; and Dr. Milton V Davis, Dallas, chairman, Medical Advisory Committee, Texas Department of Public Welfare. (For further details, see p. 6.)

Contact: C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

TEXAS PEDIATRIC SOCIETY

The 54th annual meeting of the Texas Pediatric Society, Sep 23-25, 1976, at the Fairmont Hotel, Dallas, will be combined with meetings of the Texas Chapter, American Academy of Pediatrics and the Texas Society of Pediatric Surgeons. Among the special events are a golf tournament, doubles tennis and a cocktail party.

Contact: Mary E Greene, 1801 N Lamar Blvd, Austin 78701.

TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES

Houston is the site of the Texas Research Institute of Mental Sciences' tenth annual symposium, "Research Issues in Child Psychiatry." The symposium will take place Sep 29-Oct 1, 1976. The preliminary program lists risk research and primary prevention, therapeutic intervention research, research on the family, socialization research and special research problems as primary topics.

Contact: Lore Feldman, Publications, 1300 Moursund, Texas Medical Center, Houston 77025.

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF FAMILY PHYSICIANS, John B Hynes Veterans Auditorium, Boston, Sep 20-23, 1976. $25 registration fee includes seven of nine scientific program elements. No advance registration necessary for these seven programs. Hour for hour AAFP prescribed credit. Live teaching demonstrations, programmed instruction, taping and strapping of athletic injuries demonstrations, fractures demonstrations, scientific exhibits. Clinical seminars on practical management of electrolyte problems, management of diabetes mellitus, cardiac arrhythmias, practical and useful tests in endocrine disorders, prevention and management of athletic injuries, chronic obstructive lung disease, management of hypertension, other topics. Special family events. Contact: 1740 W 92nd St, Kansas City, Mo 64114.

AMERICAN COLLEGE OF PHYSICIANS, Washington/Alaska Regional Meeting, Olympic Hotel, Seattle, Wash, Sep 12, 1976. Designed for specialists in internal medicine and related medical fields from Washington and Alaska. Up-date on developments in internal medicine. Category I, AMA Physician's Recognition Award. Contact: Dr. Alvin J Thompson, 1001 Broadway, Seattle, Wash 98122.

NATIONAL CONFERENCE ON CANCER RESEARCH AND CLINICAL INVESTIGATION, Chase-Park Plaza Hotel, St. Louis, Sep 20-22, 1976. Sponsored by American Cancer Society—National Cancer Institute. Purpose of conference is to present developments in basic cancer research and to demonstrate its relationship to clinical investigation. Open to members and students of medical and dental professions. 15 hours, Category I, AMA Physician's Recognition Award; 15 elective hours, AAFP. Contact: Dr. Sidney L Arje, American Cancer Society, 777 Third Ave, New York 10017.

For other courses and symposiums, see Continuing Education Courses, pp 26-27.

Calendar of Listings

■ Denotes Texas Meetings

SEPTEMBER

AMERICAN ACADEMY FOR CEREBRAL PALSY, Los Angeles, Sep 12-16, 1976. 1255 New Hampshire Ave NW, Room 1030, Washington, DC 20036.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, Boston, Sep 20-23, 1976. 1740 W 92nd St, Kansas City, Mo 64114.

■ AMERICAN ACADEMY OF MEDICAL ADMINISTRATORS, Dallas, Sep 19-20, 1976. 6 Beacon St, Boston 02108.

AMERICAN CANCER SOCIETY-NATIONAL CANCER INSTITUTE, St. Louis, Sep 20-22, 1976. Dr. Sidney L Arje, American Cancer Society, 777 Third Ave, New York 10017.

AMERICAN COLLEGE OF PHYSICIANS, Seattle, Wash, Sep 12, 1976. Dr. Alvin J Thompson, 1001 Broadway, Seattle, Wash 98122.

AMERICAN COUNCIL OF MEDICAL STAFFS, New Orleans, Sep 24, 1976. 3422 Bienville St, New Orleans 70119.

AMERICAN ELECTROENCEPHALOGRAPHIC SOCIETY, Dearborn, Mich, Sep 30-Oct 2, 1976. 4137 Erie St, Willoughby, Ohio 44094.

AMERICAN FRACTURE ASSOCIATION, Acapulco, Mexico, Sep 5-10, 1976. Box 10202, Atlanta 30319.

■ AMERICAN HOSPITAL ASSOCIATION, Dallas, Sep 20-23, 1976. 840 N Lake Shore Dr, Chicago 60611.

AMERICAN PSYCHIATRIC ASSOCIATION, Atlanta, Sep 19-23, 1976. 1700 18th St, NW, Washington, DC 20009.

AMERICAN ROENTGEN RAY SOCIETY, Washington, DC, Sep 18-25, 1976. 20 N Wacker Dr, Chicago 60606.

AMERICAN SOCIETY OF PLASTIC & RECONSTRUCTIVE SURGEONS, Boston, Sep 26-Oct 1, 1976. 29 E Madison St, Ste 807, Chicago 60602.

NATIONAL ASSOCIATION OF NEIGHBORHOOD HEALTH CENTERS, INC, Atlanta, Sep 20-24, 1976. 1625 I St, NW, Ste 403, Washington, DC 20006.

NATIONAL ENDOWMENT FOR THE HUMANITIES, Galveston, Sep 13-Oct 8, 1976. Julian F MacDonald, Program Officer, National Endowment for the Humanities, Washington, DC 20506.

SOCIETY FOR PEDIATRIC RADIOLOGY, Washington, DC, Sep 19-20, 1976. c/o Johns Hopkins Hospital, Baltimore 21205.

■ TEXAS MEDICAL ASSOCIATION, Fall Conference, Austin, Sep 17-19, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS PEDIATRIC SOCIETY, Dallas, Sep 23-25. 1976. Mary E Greene, 1801 N Lamar Blvd, Austin 78701.

■ TEXAS RESEARCH INSTITUTE OF MENTAL SCIENCES, Houston, Sep 29-Oct 1, 1976. Drs. Sergio Henao and Mae F McMillan, 1300 Moursund Ave, Houston 77030.

OCTOBER

AMERICAN ACADEMY OF PEDIATRICS, Washington, DC, Oct 16-21, 1976. 5320 Pine Ridge Ave, Cheyenne, Wyo 82001.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct 31-Nov 5, 1976. 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tuscon, Ariz, Oct 3-6, 1976. Box 912, DTS, Omaha 68101.

AMERICAN BOARD OF FAMILY PRACTICE, Certification examination, Seven cities throughout the US, Oct 30-31, 1976. Dr. Nicholas J Pisacano, Exec Dir-Sec, University of Kentucky Medical Center, Lexington, Ky 40506.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Atlanta, Oct 24-28, 1976. 911 Busse Highway, Park Ridge, Ill 60068.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, New Orleans, Oct 12-14, 1976. 241 E Saginaw, E Lansing, Mich 48823.

AMERICAN COLLEGE OF GASTROENTEROLOGY, Montreal, Oct 24-30, 1976. 299 Broadway, New York 10007.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct 11-15, 1976. 55 E Erie St, Chicago 60611.

AMERICAN GROUP PRACTICE ASSOCIATION, Bal Harbour, Fla, Oct 5-9, 1976. 20 S Quaker Lane, Alexandria, Va 22313.

AMERICAN MEDICAL ASSOCIATION AUXILIARY, Chicago, October, 1976. 535 N Dearborn St, Chicago, 60610.

■ AMERICAN MEDICAL TENNIS ASSOCIATION, Austin, Lakeway World of Tennis, Oct 16-23, 1976. Box 13, Alton, Ill 62002.

AMERICAN MEDICAL WRITERS ASSOCIATION, Detroit, Oct 6-10, 1976. 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, New Orleans, Oct 7-10, 1976. Box 708, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, San Francisco, Oct 9-13, 1976. 515 Busse Hwy, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF INTERNAL MEDICINE, Cambridge, Mass, Oct 8-9, 1976. William R Ramsey, Exec Officer, 703 Market St #535, San Francisco 94103.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Los Angeles, Oct 15-22, 1976. 2100 W Harrison St, Chicago 60612.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, Scottsdale, Ariz, Oct 21-23, 1976. 2111 McDonald's Dr, Suite N-515, Oak Brook, Ill 60521.

■ AMERICAN SOCIETY FOR MICROBIOLOGY, Austin, Oct 6-8, 1976. 1913 I St, NW, Washington, DC 20006.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Washington, DC, Oct 11-13, 1976. 200 Berkeley St, Boston 02117.

■ ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, San Antonio, Oct 31-Nov 4, 1976. 10605 Concord St, Kensington, Md 20795.

GERONTOLOGICAL SOCIETY, New York, Oct 13-17, 1976. 1 Dupont Circle, Ste 520, Washington, DC 20036.

INTERNATIONAL ACADEMY OF PATHOLOGY, Washington, DC, Oct 17-23, 1976. c/o Dept of Pathology, University of Indiana Medical Center, Indianapolis 46202.

INTERNATIONAL ASSOCIATION OF SOCIAL PSYCHIATRY, Yugoslavia, October, 1976. Dr. John J Carleton, 2323 Oak Lane, Santa Barbara, Calif 93105.

INTERNATIONAL CONGRESS OF ALLERGOLOGY, Buenos Aires, October, 1976. Dr. LL Henderson, Sec Gen, Mayo Clinic, Rochester, Minn 55901.

INTERNATIONAL FEDERATION OF GYNECOLOGY & OBSTETRICS, Mexico City, October, 1976. Av Baja California 317-301, Mexico 11 DF.

LEUKEMIA SOCIETY OF AMERICA, INC, Oct 28-30, 1976, Washington, DC. Meade P Brown, Exec Officer, 211 E 43rd St, New York 10017.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 2, 1976. Box 3276, Amarillo 79106.

SOUTHERN PSYCHIATRIC ASSOCIATION, Williamsburg, Va, Oct 2-5, 1976. Annette S Boutwell, Exec Officer, Box 10387, Raleigh, NC 27605.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Dallas, Oct 17-19, 1976. Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE, Location to be determined, Oct 30-31, 1976. Dr. Fred W Riley, Jr, Pres, 3718 Hundred Oaks, San Antonio 78217.

TEXAS DERMATOLOGICAL SOCIETY, Las Palmas, Canary Islands, Oct 30-Nov 7, 1976. Dr. William F Spiller, 1111 N 10th St, McAllen, Tex 78501.

■ TEXAS ORTHOPAEDIC ASSOCIATION, Salado, Tex, Oct 16, 1976. Dr. Donald E Pisar, Sec-Treas, Scott & White Clinic, Temple, Tex 76501.

WORLD MEDICAL ASSEMBLY, Sao Paulo, Brazil, Oct 24-30, 1976. DOC/Associacao Medica Brasileira, Au, Paulista 1159/3-314/315, 01311 Sao Paulo, Brazil.

NOVEMBER

AMERICAN ACADEMY OF MAXILLOFACIAL PROSTHETICS, San Diego, Calif, Nov 8-10, 1976. 110 S Jerge Dr, Elma, NY 14059.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Newton, Mass, Nov 8-12, 1976. 430 N Michigan Ave, Chicago 60611.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tucson, Ariz, Nov 28-Dec 2, 1976. Box 912, Omaha 68101.

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS, Atlanta, Nov 17-21, 1976. 11239 S Lakewood Blvd, Downey, Calif 90241.

AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Miami Beach, Fla, Nov 5-10, 1976. Robert R Weilacher, Exec Dir, 7411 Hines Place, Dallas 75235.

AMERICAN BOARD OF PATHOLOGY, Chicago, Nov 18-20, 1976. 1820 Exchange Natl Bank Bldg, 610 N Florida Ave, Tampa, Fla 33602.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN HEART ASSOCIATION, Miami Beach, Fla, Nov 15-19, 1976. 44 E 23rd St, New York 10010.

■ AMERICAN SOCIETY OF CYTOLOGY, Houston, Nov 3-6, 1976. Dr. Warren R Lang, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 1006, Philadelphia 19107.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, San Francisco, Nov 11-15, 1976. One Dupont Circle, NW, Washington, DC 20036.

■ MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Houston, Nov 11-12, 1976. Stephen C Stuyck or Dr. Margaret Davis, MD Anderson Hospital and Tumor Institute, Houston 77030.

MEDICAL SOCIETY OF THE STATE OF NEW YORK, New York, Nov 7-11, 1976. 420 Lakeville Rd, Lake Success, NY 11040.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Guadalajara, Mexico, November, 1976. c/o Virginia Bryant, 333 W Thomas Rd, Phoenix, Ariz 85013.

MEDICAL SOCIETY OF VIRGINIA, Williamsburg, Va, Nov 4-7, 1976. 4205 Dover Rd, Richmond, Va 23221.

MID-AMERICAN BREAST CANCER SYMPOSIUM, Madison, Wis, Nov 5-6, 1976. William B Hobbins, Pres, Wisconsin Breast Cancer Detection Foundation, Inc, 7803 Mineral Point Rd, Madison, Wis 53717.

NATIONAL ASSOCIATION FOR MENTAL HEALTH, Philadelphia, Nov 16-19, 1976. 1800 N Kent St, Arlington, Va 22209.

NATIONAL EYE RESEARCH FOUNDATION, Las Vegas, Nev, Nov 7-11, 1976. 18 S Michigan Ave, Chicago 60603.

NATIONAL KIDNEY FOUNDATION, Washington, DC, Nov 17-21, 1976. 116 E 27th St, New York 10016.

NEW YORK STATE SOCIETY OF DERMATOLOGY, New York, Nov 8, 1976. 420 Lexington Ave, Ste 443, New York 10017.

NEW YORK STATE SOCIETY OF INTERNAL MEDICINE, New York, Nov 10, 1976. 420 Lexington Ave, Ste 443, New York 10017.

PAN AMERICAN ASSOCIATION OF OTO-RHINO-LARYNGOLOGY AND BRONCHOESOPHAGOLOGY, New Orleans, Nov 7-11, 1976. 10921 Wilshire Blvd, Los Angeles 90024.

PENNSYLVANIA MEDICAL SOCIETY, Hershey, Pa, Nov 3-5, 1976. 20 Erford Rd, Lemoyne, Pa 17043.

PUERTO RICO MEDICAL ASSOCIATION, Santurce, PR, Nov 16-20, 1976. 1305 Fernandez Juncos Ave, Box 9387, Santurce, PR 00908.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov 28-Dec 3, 1976. 1 MONY Plaza, 15th Floor, Syracuse, NY 13202.

SOUTHERN MEDICAL ASSOCIATION, New Orleans, Nov 8-11, 1976. 2601 Highland Ave, Birmingham, Ala 35205.

■ TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Nov 6-7, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

DECEMBER

AMERICAN ACADEMY OF PSYCHOANALYSIS, Atlanta, Dec 5-8, 1976. Charlotte Bruskin, Exec Sec, 40 Gramercy Park North, New York 10010.

AMERICAN MEDICAL ASSOCIATION, Philadelphia, Dec 4-8, 1976. 535 N Dearborn St, Chicago 60610.

AMERICAN SOCIETY OF HEMATOLOGY, Boston, Dec 3-5, 1976. Dr. Thomas Bradley, Sec, Veterans Administration Hospital, 4150 Clement St, San Francisco 94121.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nev, Dec 12-16, 1976. 1516 N Lake Shore Dr, Chicago 60610.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Puerto Vallarta, Mexico, Nov 10-13, 1976. Mrs. Virginia E Bryant, Exec Sec, 333 W Thomas Rd, Suite 207, Phoenix, Ariz 85013.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 2-4, 1976. Dr. Reuben H Adams, Pres, 3630 Noble Ave, Dallas 75204.

■ TEXAS ACADEMY CHAPTER, AMERICAN COLLEGE OF PHYSICIANS, Houston, Dec 2-3, 1976. Dr. RD Bone, Sec, Box 841, Corsicana, Tex 75110.

JANUARY, 1977

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Hollywood, Fla, Jan 30-Feb 5, 1977. Virginia Kendall, Sec, 30 N Michigan Ave, Chicago 60602.

AMERICAN SOCIETY OF CONTEMPORARY OPHTHALMOLOGY, Hollywood Fla, Jan 30-Feb 5, 1977. Dr. John Bellows, Sec, 30 N Michigan Ave, Chicago 60602.

US VIRGIN ISLANDS MEDICAL SOCIETY, St. Croix, VI, Jan 13-15, 1977. Dr. James S Glenn, Chairman, US Virgin Islands Medical Society, Box 520, Christiansted, St. Croix, US Virgin Islands 00820.

FEBRUARY, 1977

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Las Vegas, Nev, Feb 3-8, 1977. Dr. Charles V Heck, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN COLLEGE OF CARDIOLOGY, Philadelphia, Feb 28-Mar 3, 1977. William D Nelligan, 9650 Rockville Pike, Bethesda, Md 20014.

ASPEN RADIOLOGY CONFERENCE, Aspen, Colo, Feb 28-Mar 4, 1977. Dr. Emanuel Salzman, Conference Chairman, Division of Radiology, Beth Israel Hospital, Denver 80204.

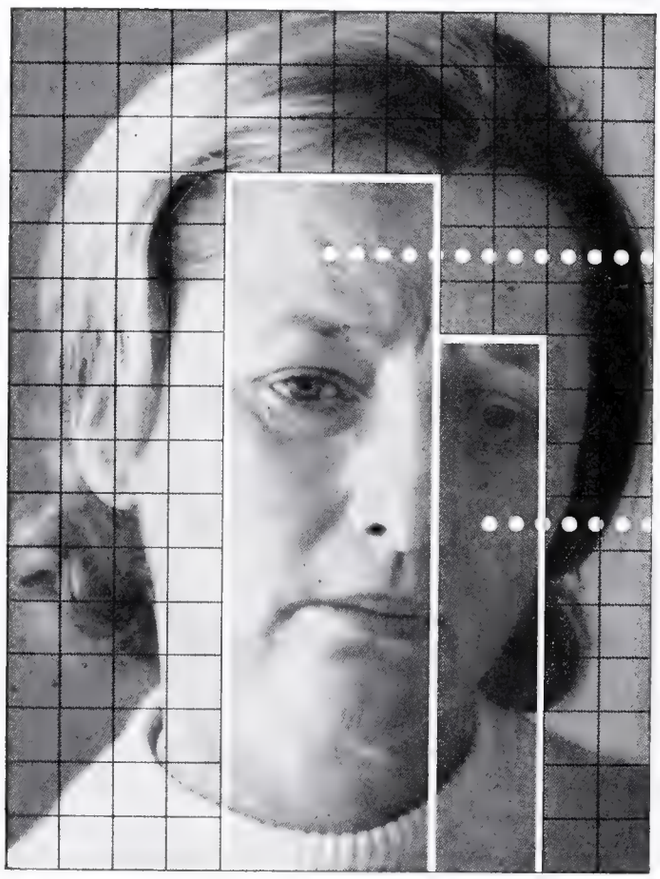
FIRST DISTRICT MEDICAL SOCIETY, Pecos, Tex, Feb 7, 1977. Dr. LN Nickey, 1515 N Oregon St, El Paso, Tex 79902.

INTERNATIONAL ACADEMY OF PROCTOLOGY, Kuala Lumpur, Singapore, Bali, Hong Kong and Taipei, Feb 17-Mar 7, 1977. Dr. Alfred J Cantor, 96 Wildwood Rd, Great Neck, NY 11024.

TAOS MEDICAL SYMPOSIUM, Taos, NM, Feb 16-19, 1977. Thomas A Bodnar, Exec Dir, Albuquerque & Bernalillo County Medical Association, 2650 Yale Blvd SE #103, Albuquerque, NM 87106.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Corpus Christi, Feb 27-Mar 2, 1977. Robert E Monroe, Exec Sec, 4107 Medical Parkway #201, Austin 78756.

Both often



Predominant psychoneurotic anxiety

Associated depressive symptoms

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology, spasticity caused by upper motor neuron disorders, athetosis, stiff-man syndrome, convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizures may require increased dosage of standard anticonvulsant medication; abrupt withdrawal may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ingestion of alcohol and other CNS depressants. Withdrawal symptoms (similar to those with barbiturates and alcohol) have occurred following abrupt discontinuance (convulsions, tremor, abdominal and muscle cramps, vomiting and sweating). Keep addiction-prone individuals under careful

respond to one

According to her major symptoms, she is a psychoneurotic patient with severe anxiety. But according to the description she gives of her feelings, part of the problem may sound like depression. This is because her problem, although primarily one of excessive anxiety, is often accompanied by depressive symptomatology. Valium (diazepam) can provide relief for both—as the excessive anxiety is relieved, the depressive symptoms associated with it are also often relieved.

There are other advantages in using Valium for the management of psychoneurotic anxiety with secondary depressive symptoms: the psychotherapeutic effect of Valium is pronounced and rapid. This means that improvement is usually apparent in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium® (diazepam) ℞

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic anxiety states with associated depressive symptoms

surveillance because of their predisposition to habituation and dependence. In pregnancy, lactation or women of childbearing age, weigh potential benefit against possible hazard.

Precautions: If combined with other psychotropics or anticonvulsants, consider carefully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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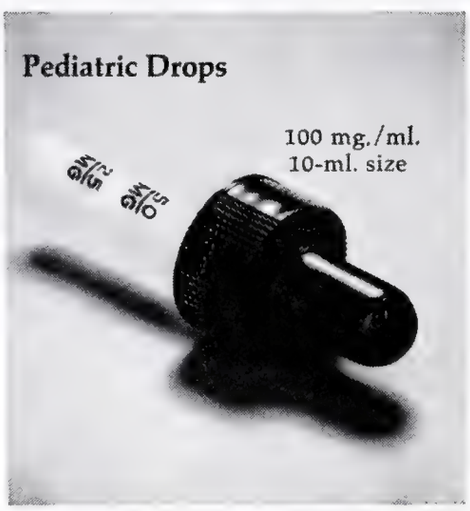

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Updating psychotropic drug therapy

Harry K. Davis, MD

Now that more information concerning the pharmacology and physiology of the psychotropic drugs is becoming available, physicians may prescribe on the basis of reasoned choices rather than empiricism.[1,2] Last year about 225 million psychotropic drug prescriptions were written, and 80% were written by nonpsychiatrists. More than 250 psychotropic drugs are now available; all of them alter both behavior and physiology. Skepticism about the scientific efficacy of psychoactive drugs has gradually decreased as laboratory investigations have provided theoretical and clinical explanations. The therapeutic effects versus the potential side effects, as well as the considerations of polypharmacy, make the clinical use of these drugs more complicated.

Fig 1 lists the more commonly used major tranquilizers (neuroleptics) and reviews the therapeutic dose ranges. There is a large variation in dosage, with the lower dose being appropriate for antianxiety effects in neuroses and psychophysiological problems, and the upper dose limit

1. Major tranquilizers (neuroleptics, antipsychotics).

	Oral therapeutic dose range
I. Phenothiazines* (commonly used)	
A. Aliphatic Group†	
1. Chlorpromazine (Thorazine) (100)	100-2,000 mg/day
2. Promazine (Sparine) (200)	150- 800 mg/day
3. Triflupromazine (Vesprin) (35)	30- 150 mg/day
B. Piperazine Group‡	
1. Fluphenazine dihydrochloride (Prolixin, Permitil) (2)	5- 30 mg/day
2. Perphenazine (Trilafon) (10)	12- 64 mg/day
3. Acetophenazine (Tindal) (3)	40- 120 mg/day
4. Trifluoperazine (Stelazine) (5)	10- 40 mg/day
5. Prochlorperazine (Compazine) (16)	30- 150 mg/day
6. Carphenazine maleate (Proketazine maleate) (35)	25- 400 mg/day
7. Butaperazine maleate (Repoise) (20)	15- 100 mg/day
C. Piperidines§	
1. Thioridazine hydrochloride (Mellaril) (100)	75- 800 mg/day
2. Mesoridazine (Serentil) (35)	150- 400 mg/day
3. Piperacetazine (Quide) (35)	40- 160 mg/day
II. Thioxanthenes	
A. Chlorprothixene (Taractan) (100)	75- 600 mg/day
B. Thiothixene (Navane) (2)	10- 80 mg/day
III. Butyrophenones	
A. Haloperidol (Haldol) (2)	2- 15 mg/day
IV. Loxapine succinate (Loxitane)	60- 200 mg/day
V. Molindone hydrochloride (Moban)	15- 225 mg/day

Numbers in parentheses denote dosage equivalency relating to 100 mg chlorpromazine as standard antipsychotic activity.
* Lethal dose ranges variable
† More hypotension, sedation, dermatitis, and convulsions, less extrapyramidal side effects
‡ More extrapyramidal side effects; less sedation, hypotension, and tendency to develop lens opacities
§ More effect on electrocardiogram; more ejaculatory disturbance and retinal toxicity, less extrapyramidal side effects

applying to overt psychoses. Relief of anxiety symptoms can occur within one to six hours after administration; however, maximum antipsychotic effects may not be evident for three weeks to six months. Therapeutic trials with a given drug must conform to both dose and time parameters.

Minor tranquilizers listed in Fig 2 are excellent antianxiety drugs, but should be used for short-term therapy (less than three months of continuous therapy). It is now well established that both the propanediole and benzodiazepine groups of drugs are abusable, and tolerance to these drugs develops rapidly. Therapeutic effects are experienced in one to four hours. When long-term therapy is anticipated, neuroleptics are the drugs of choice.

Unquestionably, tricyclic compounds remain the drugs of choice for antidepressant drug therapy. Because of possible toxic reactions, monamine oxidase inhibitors should be reserved for special clinical entities or for cases that do not respond to tricyclic drug treatment. The onset of antidepressant drug action occurs within 7 to 14 days, however symptomatic relief may occur much earlier. Treatment is advisable for a least three to six months after remission of depressive syndromes or for as long as is clinically indicated.

A Careful Drug History

Until recently, little emphasis has been placed on obtaining a patient's complete drug history before prescribing. The physician must assume responsibility for a detailed drug history for every patient who receives psychotropic drug therapy. Only with this in mind can the problems of drug selection, drug synergism, crossover, habituation, and potentiation be evaluated. What other drugs does the patient ingest as prescribed by other physicians, as over-the-counter medications, or as remedies given by friends? Data now suggest that metabolic patterns of drug responsiveness are genetically transmitted and can be ascertained from an adequate drug history. If your patient has a severe depression and you want to treat him with a tricyclic compound, it is likely that he would respond to the same drug that a relative did. Likewise, he will have a tendency to respond to the same drug with each relapse of a similar illness. Even drug absorption rates tend to be similar with similar compounds (particularly for neuroleptic and tricyclic compounds[3]) in genetically related people.

If detailed drug histories are available, recurrence of complications because of repeated administrations of a drug can be prevented. Availability of drug history has been greatly enhanced by improved hospital and doctors' office records, and by better hospital discharge planning.

Drug history, then, is of prime importance until we are able to routinely measure plasma levels and sensitivity of the various psychotropic drugs. Plasma levels of antidepressant drugs are routinely used in Sweden, and these data when available will be quite helpful in understanding absorption rate problems. Within a few years we may be able to determine the variations in plasma level among individual patients as well as in the patient's family.

Drugs Specific for Illness, Not Symptoms

Careful, complete, and specific diagnosis allows accurate selection of drugs. For instance, in treating a hypochondriacal patient, the physician would try not just to relieve the patient's symptoms but rather to diagnose and treat an underlying disease or personality malfunction. Use of anti-

depressant would be more effective in treating the depressive illness (with hypochondriasis) than in treating the symptom of hypochondriasis alone with a minor tranquilizer.

In the selection of a psychotropic drug, the therapeutic effects should be balanced against the side effects. The decision is also based on the anticipated duration of treatment, so that in chronic disease, drugs with few side effects may be emphasized. Since most neuroleptic drugs produce a remission of schizophrenia, selection of the specific drug would be based on the nature of its side effects (sedation, autonomic effects, hypotension, and so forth). Drug selection can be summarized in the concept of individually selecting a drug for the patient and his disease.

The drug that is selected initially should be continued unless toxicity or side effects intervene. The drug dose may be altered, or a similar drug substituted, or a counteracting drug added, if side effects are bothersome. In choosing among several drugs within the same drug group, the relative strengths should be considered. The incidence of side effects as well as the cost and availability of the drug would be balanced with the desirable therapeutic effects. For instance, if several phenothiazine drugs are equally successful in maintaining the remission of schizophrenia, then the chances of a severe side effect must be considered, for example, tardive dyskinesia. The drug selected then would be one with a lower incidence of complications.

Before the decision is made to switch to another drug, however, the dose and route of administration should be checked as well as the variable predicted responses to an individual drug. Is one sure that the patient is receiving the drug according to the prescribed directions? It is likewise important to realize that once the patient's symptoms are in good control, the disease process is variable enough that the dose of the drug can be reduced (particularly the neuroleptics and tricyclic compounds)

2. Minor tranquilizers (antianxiety agents).

	Oral Therapeutic Dose Per Day	Lethal Dose
I. Propanedioles		
A. Meprobamate (Equanil, Miltown)	800-3,200 mg	Uncertain (8,400-40,000 mg)
B. Tybamate (Solacen, Tybatran)	1,000-3,000 mg	Uncertain (8,400-40,000 mg)
II. Benzodiazepines		
A. Chlordiazepoxide (Librium)	15- 150 mg	750 mg
B. Diazepam (Valium)	4- 40 mg	700 mg
C. Oxazepam (Serax)	30- 120 mg	Unknown
D. Clorazepate (Tranxene)	15- 60 mg	Unknown
III. Diphenylmethane Derivatives (Sedating Antihistamines)		
A. Hydroxyzine (Vistaril, Atarax)	75- 400 mg	Unknown
B. Promethazine (Phenergran)	12.5- 100 mg	Unknown
C. Diphenhydramine (Benadryl)	25- 200 mg	Unknown

by one-half to two-thirds for maintenance therapy. Failure to do this further increases drug complications and side effects.

Hazards of Polypharmacy

Accumulated data now suggest that drug combinations (polypharmacy) are highly undesirable. The literature contains numerous examples to document this. Nicotine, barbiturates and alcohol are known to decrease tricyclic plasma levels. Hypnotics, with the exception of flurazepam (Dalmane) and chloral hydrate, increase the rate of metabolism of the tricyclics and thus decrease their effectiveness as sedatives.

The addition of neuroleptics to tricyclics increases the plasma level of tricyclics and thus enhances their therapeutic effect. An example of such a combination would be perphenazine (Trilafon) plus amitriptyline (Elavil), available as Triavil or Etrafon.

Diazepam (Valium) and chlordiazapoxide (Librium) do not significantly alter the levels of tricyclic compounds. Oral contraceptives plus thioridazine (Mellaril) and amitripytyline (Elavil), as well as other certain neuroleptics, have an undesirable side effect of increased weight gain. Generally, females require larger doses of tricyclics because of a large depot of body fat.

Unit Dose Concept

Another concept to emerge recently is that of the unit dose. The entire daily dose is given at one time, usually at bedtime. Several studies have indicated that this practice does increase drug compliance. One study[4] indicated that 70% of the patients on a four-times-daily dose failed to take their drug 25% to 50% of the time, 60% failed to take a three-times-daily dose, 30% failed to take a twice-daily dose and

3. Antidepressant drugs.

Drugs	Oral Therapeutic Dose Range	Adult Lethal Dose
Tricyclic Compounds*		
Imipramine (Tofranil) (Presamine)	100-300 mg/day	10-30 times daily dose
Desipramine (Pertofrane) (Norpramin)	150-250 mg/day	
Nortriptyline (Aventyl)	100-150 mg/day	
Amitriptyline (Elavil)	150-300 mg/day	
Doxepin (Sinequan) (Adapin)	150-300 mg/day	
Protriptyline (Vivactil)	15- 60 mg/day	
Compounds		
Triavil or Etrafon (Perphenazine + amitriptyline) Dosages available (2-10) (2-25) (4-10) (4-25)		Not determined
Deprol (Benactyzine, 1 mg, + meprobamate, 400 mg)		
Monamine Oxidase Inhibitors (MAOI Group)		
Isocarboxazid (Marplan)	300-mg/day; maintenance, 10-20 mg/day	Approximately 10 times daily dose
Phenelzine (Nardil)	45 mg/day; maintenance, 15 mg/day	Approximately 10 times daily dose
Tranylcypromine (Parnate)	30 mg/day; maintenance, 10-20 mg/day	Approximately 6 times daily dose

*To be reserved for cautious use following prescribed drug and food omissions.

only 7% failed to take a daily dose 25% to 50% of the time. Another advantage of the unit dose is the decreased cost to the patient. Chlorpromazine (Thorazine) in 50-mg tablets cost approximately $.07, whereas 100-mg tablets cost $.085, and 200-mg tablets cost only $.10. The higher doses of neuroleptics usually provide adequate bedtime sedation to preclude the use of hypnotics.[5] Side effects are much less bothersome when the patient is asleep, and most are dissipated before the patient arises in the morning. Fortunately, the unit dose concept applies to nearly all neuroleptics,[5] tricyclics,[6,7] and tranquilizers.[8,9] Oxazepam (Serax) has a very short biologic half life and is not as effective given as a unit dose. Evening administration (between 8 pm and bedtime) is preferable for the unit dose.

Certain patients have difficulty adjusting to the unit dose, since most expect immediate effects after ingestion of the drug. Simple explanations of the unit dose are necessary to enhance patient cooperation. Caution should be exercised in prescribing for patients with existing medical problems or advanced age in whom large initial doses might significantly alter hemodynamics.

Drug Holidays

Another innovation is that of drug holidays. This must be individualized for specific drugs, but most neuroleptics and tricyclics maintain levels that permit the patient to omit the weekend doses. In maintenance therapy, the use of a drug for a five-day period every week is all that is necessary. Drug holidays reduce the overall cost of treatment as well as help to obviate the psychological crutch that a drug may become during long-term administration.

Drug Complications

Current medical practices now demand that each physician acquaint himself not in generalities but with specific details, especially complications and side effects, concerning each drug he writes a prescription for. The detailed information is available in package inserts and the *Physicians' Desk Reference*. As medicolegal questions arise, it becomes increasingly important not to prescribe or to use a drug in any manner different from that specified on the package insert. As the physician carefully studies the various psychoactive drugs he uses, he will find that there are multiple, oftentimes frightening, precautions urged on him. Clinical experience with a drug allays much of his anxiety about its use.

One of the new complications observed and described in the literature has been tardive dyskinesia.[11] Dyskinesias have been known as a side effect of the neuroleptic (phenothiazine) drugs. With the need to treat the elderly and patients with existing extrapyramidal disease, there has been an apparent increase in incidence of tardive dyskinesia, primarily oral-buccal type. It is postulated that with too little dopaminergic transmission at receptor sites in the extrapyramidal system, parkinsonism will develop, whereas an abundance of dopaminergic transmission will tend to produce tardive dyskinesia. We do not have a satisfactory treatment program worked out for the tardive dyskinesias, although programs involving the use of additional phenothiazine drugs, acetamidobenzoate (Deaner), and amantadine hydrochloride (Symmetrel) are promising. Drug holidays allow less drug accumulations, thereby helping to prevent the alpha receptors from developing a "denervation hypersen-

sitivity" to dopamine (the proposed mechanism for this syndrome).

Since phenothiazines were initially used in the 1950's, parkinsonism has been an ever-recurring complication. It has been both prevented and treated by the use of various anti-parkinsonism drugs such as Cogentin, Artane, and similar drugs. For several years it was generally accepted practice to prevent the parkinsonian complications of the phenothiazines by using antiparkinsonism drugs. This practice is not without complications, and so the current practice is a gradual build-up dose of the neuroleptic drugs and an antidote used only if parkinsonism symptoms develop. An anti-parkinsonism drug is rarely needed after it is used for three to four months.

Cardiac dysrhythmias are continuing to be reported in the literature. These are unpredictable and oftentimes undetected until symptoms develop. The most serious have been ventricular dysrhythmias, particularly fibrillation and tachycardia. Sudden deaths in otherwise healthy patients who are receiving phenothiazines have been reported. These are apparently a result of sensitivity or idiosyncratic reaction to the drug.

Complications of drug withdrawal continue to be a problem. Most physicians now are aware of the need for slow withdrawal of narcotic and barbiturate drugs to decrease withdrawal deliria. To this list must be added meprobamate, since deliria and even sudden deaths have been reported with abrupt withdrawal of high doses. Most other drugs may be abruptly withdrawn, but gradual withdrawal more nearly maintains a physiologic homeostasis. Treatment of drug withdrawal delirium is similar to the treatment of other delirious states.

Hypotensive accidents occur with the neuroleptic and tricyclic drugs, particularly with larger doses and especially in hypersusceptible people. Hypotensive crises with syncopal attacks and possible injury are always a danger. Routine blood pressure determinations twice daily in the lying and sitting positions are helpful to alert the physician to this complication.

Several of the phenothiazine drugs as well as reserpine have been indicted as increasing a depressive mood and decreasing affective responses. Awareness of this possibility is important to avoid deepening a depressive illness.

The crossover phenomenon continues to be one of the more debatable complications described in the literature. Initially, it was thought that the crossover from a monamine oxidase (MAO) inhibitor to a tricyclic compound without an adequate interval of 10 to 14 days might lead to a severe drug reaction and possibly death. The crossover from a tricyclic compound to an MAO inhibitor seems to be considerably safer, although it has not received complete sanction by psychopharmacologists. Until further investigations clarify this issue, the plan suggested in the package insert, allowing 10 to 14 days' interval between the two drugs, seems in order.

Newer Drugs Available

Several new drugs may be added to the list of those available, but only a few seem to hold promise of improved psychotherapeutic results. Some dramatic results for depressive illness have been reported with thyrotropin-releasing hormone (TRH),[12,13] although the exact benefit remains in question. Thyroid extract has long been known to be helpful in treating the depressed patient who has a demonstrable thyroid deficiency.

The butyrophenones (Haldol) and the

thioxanthenes (Navane, Taractan) have been effectively used in large doses as antipsychotic agents and in small doses as antianxiety agents. With gradually increasing doses, the occurrence of tardive dyskinesia is unusual and the incidence of other undesirable side effects is likewise low. Doxepin (Sinequan, Adapin) has been a useful tricyclic compound. It has minimal side effects, yet retains its therapeutic efficacy as a tricyclic antidepressant. The drug combinations of Triavil and Etrafon are particularly helpful, especially if the diagnosis is in question or if the patient has diverse symptoms that demand a drug combination. Fluphenazine (Prolixin Enanthate) has been esterified and is available as Prolixin Decanoate.[13] The esterification has increased the therapeutic efficiency and decreased its toxicity to provide an effective neuroleptic drug for intramuscular use. Twenty-five to 50 mg given intramuscularly every two to four weeks is an adequate maintenance dosage. This drug program is particularly helpful when a patient must return to stressful environmental situations or when the family has had a high incidence of readmission.

A new antipsychotic drug, loxapine sulfate (Loxitane), has definite antipsychotic effects with rare extrapyramidal motor effects. It does resemble thioridazine (Mellaril) in some respects. It is still in the early stages of clinical evaluation in the United States, and its eventual therapeutic effects are uncertain.

A slight modification in the structure of butyrophenones has created a diphenylbutyrylpiperdine, of which pimozide has been extensively tested. A second drug in this group is penfluridol,[15] and it is of interest because of its slow rate of disposition from the body. A once-a-week dose may be adequate for maintenance of the chronic schizophrenic patient. Molindone hydrochloride (Moban) clinically resembles the piperazine phenothiazines, and adds another effective antipsychotic agent.[16]

Rubidium,[17] another addition to ion therapy, was assumed to react opposite to lithium carbonate, and thus be effective in treating depression. Thus far, investigative reports are discouraging.

The use of methadone during the past ten years has represented a major advance in the treatment of opiate dependence. A new narcotic antagonist, naltrexone,[18] promises to block effects of opiates (methadone does not) and thus, through lack of habit reinforcement, lead to extinction of the addiction. A single oral dose may block opiates for two to three days.

Lithium Carbonate in Manic Depressive Disease

Lithium carbonate has been shown to be 80% effective in bipolar manic-depressive disease, and less effective in unipolar manic-depressive disease, particularly depression.[19,20] It is important to stress that a complete physical examination and medical workup are necessary before lithium carbonate is prescribed, with particular emphasis on thyroid, liver, and renal function studies, baseline electrocardiogram, determinations of T-4 and T-3, protein-bound iodine, liver enzymes, blood urea nitrogen, and creatinine. The treatment program consists of the usual dose of 1,200 to 1,600 mg of lithium carbonate daily. In the extreme manic phases of manic-depressive disease, the concomitant use of one or more of the sedating neuroleptic drugs is usually necessary.

Toxicity involving the gastrointestinal tract and central nervous system occurs in only a small percentage of the patients.

Toxicity other than in the central nervous system may occur when the serum level rises above 1.5 mEq/liter. It is necessary to monitor the serum levels twice weekly during the dose adjustment phase, and then only as indicated. After several months of stability, lithium determinations every three to six months seem to be adequate for prudent follow-up care.

It is helpful to understand the new terminology established. Bipolar depressions refer to classic manic-depressive disease, and unipolar depressions refer to the previously diagnosed endogenous depression or the variants of manic-depressive disorders in which the depressive episodes predominate.

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Dr. Davis, Clinical Associate Professor, Department of Psychiatry and Department of Family Medicine, The University of Texas Medical Branch, Galveston, TX 77550.

APPENDIX

Dalmane: Roche
Trilafon: Schering
Elavil: Merck Sharp & Dohme
Etrafon: Schering
Valium: Roche
Mellaril: Sandoz
Librium: Roche
Thorazine: Smith Kline & French
Serax: Wyeth
Sinequan: Pfizer
Adapin: Pennwalt
Prolixin: Squibb
Loxitane: Lederle
Haldol: McNeil
Navane: Roerig
Deaner: Riker
Symmetrel: Endo
Sparine: Wyeth
Vesprin: Squibb
Permitil: Schering
Tindal: Schering
Stelazine: Smith Kline & French
Compazine: Smith Kline & French
Proketazine: Wyeth
Repoise: Robins
Serentil: Sandoz
Quide: Dow
Taractan: Roche
Moban: Endo
Equanil: Wyeth
Miltown: Wallace
Solacen: Wallace
Tybatran: Robins
Tranxene: Abbott
Vistaril: Pfizer
Atarax: Roerig
Phenergan: Wyeth
Benadryl: Parke-Davis
Tofranil: Geigy
Presamine: USV Pharmaceuticals
Pertofrane: USV Pharmaceuticals
Norpramin: Lakeside
Aventyl: Lilly
Vivactil: Merck Sharp & Dohme
Triavil: Merck Sharp & Dohme
Deprol: Wallace
Marplan: Roche
Nardil: Warner-Chilcott
Parnate: Smith Kline & French

Practical use of psychotropic drugs in children

James H. White, MD

Psychotropic drugs are always used for symptomatic treatment and are never curative, but they are equally important in treatment of disturbed children as in the treatment of adults. They are extremely useful in managing the behavior problems of childhood and adolescence in combination with supportive counseling. Of course, no drug should be employed without firm indications for its use. For this reason, it is appropriate to speak in terms of specific target symptoms; the symptom to be modified with pharmacologic therapy should be identified and then a drug appropriate for that symptom selected.[1]

An Approach to Drug Treatment

A rational approach to psychopharmacologic intervention in psychiatric disorders of childhood and adolescence should take into account the following goals:

1. Treatment is symptomatic and not curative; the physician should pick out the specific symptom or group of symptoms that he desires to change, and then choose the drug to which the target symptom is most likely to respond.

2. The main purpose of pharmacologic treatment is to return the child's behavior to a functional mode more rapidly, thereby preventing long periods of failure at both academic and social levels, and facilitating social functioning within the family unit.

3. It may be desirable to break a cycle which perpetuates itself, that is, bad behavior leads parents to expect more bad behavior, to which the child responds with further bad behavior, and so on.

4. Pharmacologic treatment will facilitate, and can be used as an adjunct to, individual, supportive, or deep psychotherapy as well as family therapy.[2]

Consideration of Specific Target Symptoms

The Hyperactive Child

The characteristics of the syndrome are short attention span, distractibility, poor impulse control, inability to be still for any period of time, hypermotor activity which may have various manifestations, associated learning disorders, poor school performance, poor peer relations, and poorly controlled aggression. Regardless of their suspected etiology, hyperkinetic symptoms tend to respond favorably to pharmacologic therapy. Although the electroencephalogram is more likely to be abnormal if the child is organically impaired, this finding is not necessary for the diagnosis of organic impairment. The child with an abnormal EEG or other abnormal neurologic findings tends to respond more dramatically to drug management of hyperkinesis, but this is relative rather than absolute.[3]

The drugs used to treat the hyperkinetic syndrome are methylphenidate hydrochloride, dextroamphetamine sulfate, imipramine hydrochloride, thioridazine hydrochloride, and pemoline (Cylert).[4]

At the present time the preferred drug for treating this syndrome is methylphenidate (Ritalin). This drug is not recommended for a child less than 6 years of age because of recent evidence that it suppresses the rate of physical growth. This effect does appear to be dose related.[5] As a general rule, hyperkinetic children do not require treatment before they reach school age. If symptoms in a preschooler are so severe that the parents are unable to manage the child, then a relatively mild agent such as promethazine hydrochloride (Phenergan) syrup, 1 tsp two to three times a day, may be used.[6]

Medication for the child of average size and body weight between the ages of 6 and

8 should begin with a dosage of 5 mg of methylphenidate hydrochloride in the morning with breakfast and 5 mg at noon with lunch. The drug must be given with meals because of its appetite-suppressing effect if given before meals, and also because gastrointestinal disturbances sometimes occur when it is given without prior food intake. Because methylphenidate has a rather short duration of action (about four hours), it needs to be given both morning and noon.

The dosage for a child of average size and weight over 8 years of age should start at 10 mg of methylphenidate hydrochloride given with the morning meal and 10 mg given with the noon meal. If the child is excessively overactive and uncontainable in the afternoon after school, then an additional dose of 5 mg (or one-half the noontime dose) may be added at 4 pm. In no circumstances should the drug be given later than 4 pm because of the problem of insomnia.

Methylphenidate has a rapid effect and if the child is receiving the proper dosage, the response should be immediate. The most reliable way to assess the efficacy of the drug is through reports from the child's teacher as to changes in behavior. The dosage should be adjusted no more frequently than at weekly intervals and only one dose should be increased at a time. For instance, if the child began receiving 10 mg in the morning and 10 mg at noon and the teacher reports that he is still highly distractible, then the dosage should be increased to 15 mg in the morning and 10 mg at noon. If it is necessary to increase the dosage, the increase always should be accomplished by 5 mg increments, one dose at a time, at weekly intervals.

Once the dosage is established, the drug should be given only on school days and not on weekends and holidays. Methylphenidate has been shown to suppress physical growth when given in large amounts over extended periods of time. By withholding the drug on nonschool days, this growth-suppressing effect is more or less avoided.[5] The usual maximum daily dosage of methylphenidate hydrochloride should not exceed 60 to 75 mg per day.[6]

In the summer months the child should be given a drug-free period and should be allowed to start the new school year without medication to assess his current need for it. As a general rule, the first four weeks of school can be allowed as a trial period; if the teacher then reports that the child is still distractible and having similar difficulties, the drug may be reinstituted.[7] The dosage is dependent on body weight and may have to be increased as the child grows. Medication with methylphenidate should not be continued in patients beyond the age of 13 because of the drug's potential for abuse among adolescents.

Before the introduction of methylphenidate, dextroamphetamine was the preferred drug for the hyperkinetic syndrome. It is no longer considered to be the primary drug. Generally, dextroamphetamine is now reserved for those hyperkinetic children who do not respond to treatment with methylphenidate or imipramine hydrochloride. The method of administration of dextroamphetamine is much the same as that of methylphenidate, although dextroamphetamine's duration of action is somewhat longer and in some cases it may need to be given only in the mornings. For children over the age of 6, dextroamphetamine sulfate dosage is usually begun at 5 mg before breakfast and 5 mg at lunch. It is then increased by 2.5-mg increments, one dose at a time, at weekly intervals. The same

schedule of drug-free periods (weekends, holidays, the summer months) should be observed with dextroamphetamine sulfate as with methylphenidate. The usual dosage range is 5 to 40 mg per day, with median dosage around 20 mg per day.[7] Dextroamphetamine has been shown to have a greater growth-inhibiting potential then does methylphenidate, and for this reason its use for long periods of time should be avoided whenever possible.[5] A complete blood count should be done after four to six weeks of therapy and at six-month intervals, as is true with methylphenidate.

In recent studies imipramine hydrochloride has been found to be quite effective in managing the hyperkinetic syndrome, and it has some definite advantages over methylphenidate and dextroamphetamine.[8] Quantitatively, however, the stimulant drugs do seem to be superior to imipramine. The chief advantages of imipramine hydrochloride are that (1) its duration of action is long and therefore a dose need not be given during the school day, and (2) quantitatively, its growth-inhibiting potential is far less than that of the stimulant type drugs. Among the disadvantages is the fact that imipramine does lower the seizure threshhold considerably, and therefore it cannot be used in a patient who is epileptic and hyperkinetic.[9]

In high doses, imipramine may produce electrocardiographic abnormalities. This usually does not occur, however, unless the dosages are above 4 to 5 mg/kg of body weight/day. In the usual dosage ranges, where the total daily dose does not rise above 75 mg per day, ECG abnormalities have not been reported.[10]

Imipramine hydrochloride is generally prescribed in the following manner: the starting dose for the average size child below the age of 9 would be 10 mg in the morning before school, and 10 mg in the evening after school. It need not be given in relation to food intake since there is minimal appetite-suppressing effect. If necessary, the dosage is then increased by 10-mg increments, one dose at a time, at weekly intervals. Teachers' reports on changes in the child's behavior are utilized to assess the efficacy of the treatment. Each September, the child should be allowed to attend the first four weeks of school without medication in order to assess his current need for it.

In children over 9 years of age a starting dose of imipramine hydrochloride, 25 mg twice daily, may be initiated. A child who continues to show signs of hyperkinesis following his 13th birthday should be given imipramine rather than one of the stimulant type drugs because imipramine has no potential for abuse. Because imipramine is known to cause an idiosyncratic reaction of leukopenia in some individuals, a complete blood count with differential should be done after two weeks of therapy and then at six-month intervals. If leukopenia develops, the drug must be withdrawn.[4] Imipramine may have paradoxical effects, causing an increase in anxiety and hyperkinesis, but this is relatively rare. If it should occur, the drug should be withdrawn.

Thioridazine (Mellaril) is considered the last drug of choice for this syndrome. When the other drugs are ineffective and thioridazine hydrochloride must be used, then it should be prescribed in initial doses of 10 mg twice daily, preferably morning and afternoon, and increased by 10-mg increments, one dose at a time, at weekly intervals. If the child experiences a good deal of subjective anxiety, thioridazine may be quite effective in controlling this. Leuko-

penia may occur with thioridazine and a complete blood count should be done after six weeks of therapy and at six-month intervals during prolonged therapy. There is no set maximum daily dose; it is generally determined by the clinical efficacy and the appearance of adverse effects.[3]

Enuresis

When we speak of enuresis, we are referring to involuntary nocturnal bedwetting for which no demonstrable pathologic condition can account. Before therapy for enuresis is begun, the patient should have a urinalysis, urine culture, and sensitivity studies to rule out infection and similar disorders.[11] Enuresis, according to current research, is probably a disorder of sleep arousal. It occurs during the emergence from stages three and four sleep to the first stage of rapid eye movement sleep. There is a strong hereditary tendency, especially in male relatives of the patient. It is not necessarily associated with mental disorders primarily, although secondary mental disorder resulting from chronic enuresis is common.

The preferred drug for nocturnal enuresis is imipramine hydrochloride (Tofranil). It should be started, for a child under 9 years of age, at an initial dose of 10 mg one hour before bedtime. It should then be increased by 10-mg increments. In a child over 9 years of age, the starting dose should be 25 mg, and the drug should be increased at 25 mg increments at weekly intervals.

The maximum dose should not exceed 75 mg. If there has been no change in the frequency of enuresis after one week of therapy, then the time of the dosage should be changed to 6 pm.

The rate of decline in the frequency of the enuresis will be gradual and not necessarily immediate. Generally six months of therapy is required, and if the child has been free of enuresis for six months, then the dosage of the drug can be reduced and discontinued. The child should have the same hematologic examination as has been described for children receiving imipramine therapy for hyperkinesis.[12]

Pavor Nocturnus, or Night Terrors

This condition, too, is felt to be a disorder of arousal, occurring during the emergence of stages three and four sleep to the first stage of rapid eye movement sleep. The patient awakens screaming and staring, and cannot be aroused. This may last a few minutes and then the patient goes back to sleep and does not remember the episode the next morning. This condition may or may not be associated with primary psychopathology. The drug of choice for this condition is diazepam (Valium), with a dosage of 2 to 5 mg at bedtime. Other drugs which may be equally effective are imipramine hydrochloride, 10 to 25 mg one hour before bedtime, or thioridazine hydrochloride, 10 to 25 mg at bedtime.[13]

Somnambulism, or Sleep Walking

This, too, is a disorder of sleep arousal with the same etiologic basis as enuresis and pavor nocturnus, and the treatment is the same as that for pavor nocturnus.[13]

Insomnia

This symptom is being considered last because it is a complaint often presented to the primary care physician. If difficulty in getting the child to sleep is a continuing problem, treatment may be considered if other measures fail. The most effective and

safest drug to be used for its sedative hypnotic effect in children is diphenhydramine (Benadryl). It may be given either in the syrup or capsule form, and the dose range adjusted to the individual patient's need. It is virtually without any adverse reactions.

General Principles

The use of psychotropic drugs must always be viewed as a temporary measure and the patient should be continually evaluated with the object of discontinuing the drug as soon as possible. The most common reason for the failure of drugs to be effective, particularly in the treatment of hyperkinesis, is either inadequate dosage or improper administration. The dosage and times of administration as outlined are critical to the effectiveness of the regimen. The fact that children who have any of these various symptoms may also have secondary or primary psychiatric disorders must be considered. Usually, with the hyperkinetic child, for example, supportive counseling or psychotherapy is indicated because of the poor self concept that results from continued failures. Parents also require counseling as to what they may reasonably expect from their child.

If this outline is generally followed, then the treatment of these behavioral complexes with psychopharmacologic agents usually will be effective.

This comprehensive review article was prepared for Texas Medicine through the cooperation of Edward N. Brandt, MD, Dean, and Michael M. Warren, MD, Chairman, Continuing Education Committee, The University of Texas Medical Branch, Galveston.

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Warnings: Do not use dietary potassium supplements or potassium salts unless hypokalemia develops or dietary potassium intake is markedly impaired. Enteric-coated potassium salts may cause small bowel stenosis with or without ulceration. Hyperkalemia (>5.4 mEq/L) has been reported in 4% of patients under 60 years, in 12% of patients over 60 years, and in less than 8% of patients overall. Rarely, cases have been associated with cardiac irregularities. Accordingly, **check serum potassium during therapy, particularly in patients with suspected or confirmed renal insufficiency (e.g., elderly or diabetics). If hyperkalemia develops, substitute a thiazide alone. If spironolactone is used concomitantly with 'Dyazide', check serum potassium frequently**—both can cause potassium retention and sometimes hyperkalemia. Two deaths have been reported in patients on such combined therapy (in one, recommended dosage was exceeded; in the other, serum electrolytes were not properly monitored). Observe patients on 'Dyazide' regularly for possible blood dyscrasias, liver damage or other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium (triamterene, SK&F). Rarely, leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with the thiazides. Watch for signs of impending coma in acutely ill cirrhotics. Thiazides are reported to cross the placental barrier and appear in breast milk. This may result in fetal or neonatal hyperbilirubinemia, thrombocytopenia, altered carbohydrate metabolism and possibly other adverse reactions that have occurred in the adult. When used during pregnancy or in women who might bear children, weigh potential benefits against possible hazards to fetus.

Precautions: Do periodic serum electrolyte and BUN determinations. Do periodic hematologic studies in cirrhotics with splenomegaly. Antihypertensive effects may be enhanced in postsympathectomy patients. The following may occur: hyperuricemia and gout, reversible nitrogen retention, decreasing alkali reserve with possible metabolic acidosis, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), digitalis intoxication (in hypokalemia). Use cautiously in surgical patients. Concomitant use with antihypertensive agents may result in an additive hypotensive effect. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis; rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting (may indicate electrolyte imbalance), diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

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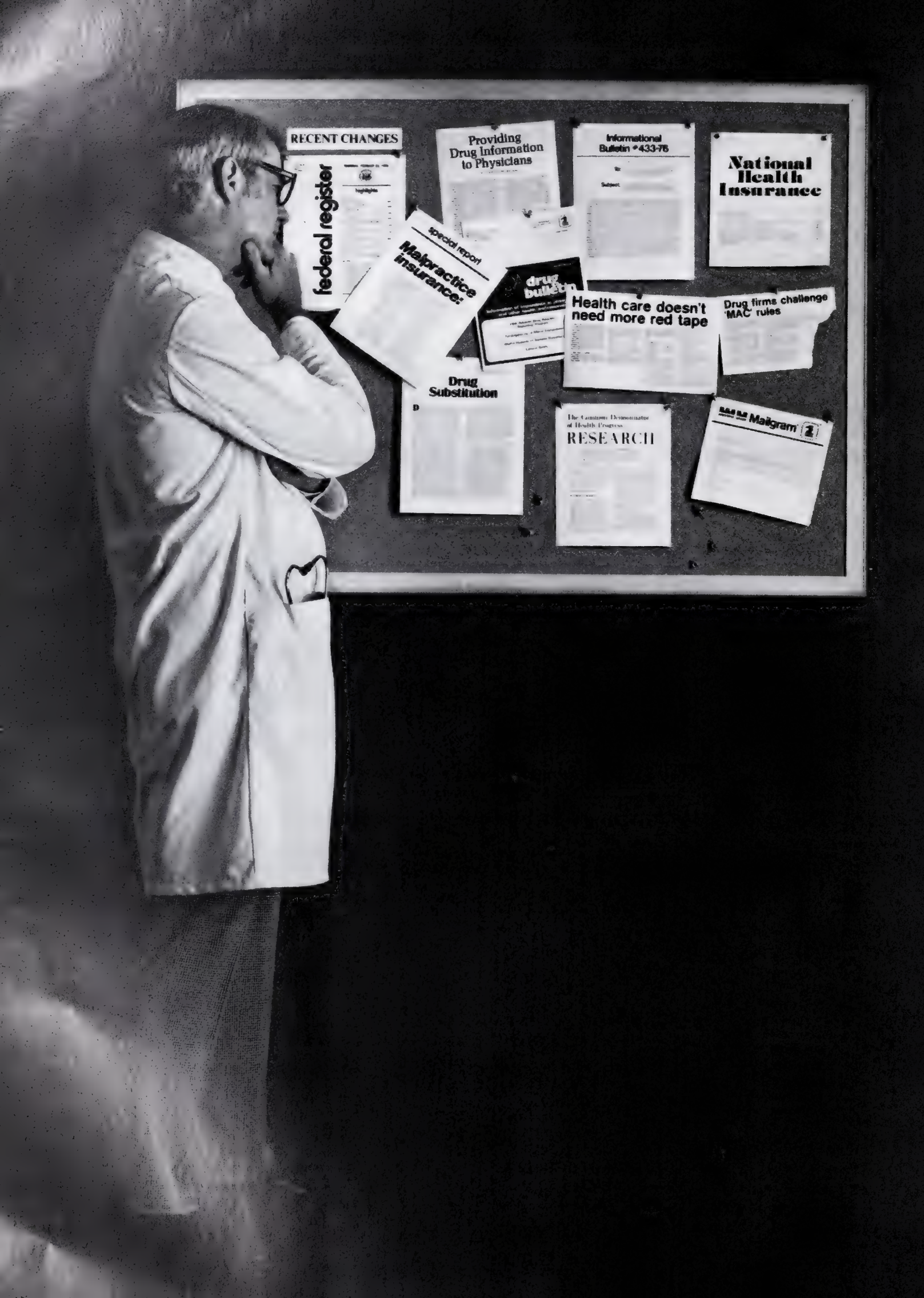
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Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

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Use and abuse of adrenocortical steroid hormones in clinical practice

George T. Bryan, MD

Adrenocortical hormones have been available for use in therapy for nearly three decades. During this time our understanding of the physiology and pharmacology of this group of drugs has improved; the indications and contraindications for their use, and their side effects, have been defined more clearly. An approach to the use of these compounds in clinical practice is presented herein. This article is intended to dispel some of the misinformation and myths about adrenal steroid therapy, and to help the physician approach adrenocortical therapy with greater reason and competence. (The fundamentals of adrenal physiology and pharmacology, prerequisite to understanding the information presented, may be reviewed in any standard textbook of endocrinology.)

The treatment of patients with adrenocortical steroids requires an approach that can be used as a basis for therapy, but that can be modified with due regard for the patient's age, size, nutritional state, hepatic function, and basic disease process. I shall present as *models* the management of hypoadrenocorticism (Addison's disease) and isolated hypopituitarism (lack of adrenocorticotrophic hormone). By using these models, the reader can easily gain an understanding of the patient who is being treated with large doses of adrenocortical steroid (see self-instruction unit, p 65).

Replacement Therapy for Hypoadrenocorticism (Addison's Disease)

The general physician is rarely faced with the problem of treating Addison's disease. However, if he can understand that treatment model, then it will be much simpler for him to understand and to implement modification of that treatment regimen for other adrenal and pituitary problems as well as for pharmacologic treatment with adrenal steroids.

The patient with no adrenal function has no source of carbohydrate-active steroids such as cortisol. He is unable to mobilize glucose from amino acids or to inhibit the release of adrenocorticotrophic hormone (ACTH) from the pituitary. He is also deficient in the sodium-retaining activity (mineralocorticoid) of steroids such as aldosterone. The therapeutic approach to this patient involves artificially dividing adrenal activity between the glucocorticoid and the mineralocorticoid so that therapy can be started logically and modified appropriately.

Carbohydrate-Active Steroids (Glucocorticoids)

In selecting a carbohydrate-active steroid, most physicians have certain biases. My bias is that replacement therapy should mimic normal function as closely as possible. Therefore, the best drug for replacement therapy is cortisol. Cortisol is readily available in tablet and liquid form, is relatively inexpensive, and is free of side effects and toxic effects when administered in replacement-level dosage. The sodium-retaining, potassium-excreting, gluconeogenic, ACTH-inhibiting, and growth-inhibiting properties of cortisol are optimal. The major disadvantage to this corticosteroid is its short half-life in circulating plasma (90 minutes or so), with the resultant necessity for frequent administration (every six to eight hours by mouth). A starting dose for physiologic replacement is 25 $\pm$5 mg/sq M/day by mouth. The oral replacement dose is twice the normal cortisol secretion rate of 12 $\pm$2 mg/sq M/day. The starting dose should be in the upper range

to assure prompt alleviation of symptoms, and should be reduced when early side effects appear. The daily dose should be divided into at least three portions. One convenient method is to give about one-half the dose on arising, one-fourth at lunch or early in the afternoon, and one-fourth at bedtime.

Follow-up visits should be scheduled at two- to four-week intervals for about two months, and then should be spaced according to the needs of the patient and family for reinforcing instructions and answering questions about modifications of therapy.

What signs and symptoms should be looked for? Ask about mood, physical stamina, appetite, headaches, and nausea and vomiting. Euphoria and increased appetite are a consequence of overdosage, whereas depression, poor physical stamina, poor appetite, headache, and nausea and vomiting are a result of underdosage. The physical examination should focus on changes in weight and growth, appearance of rounding of the face, lowering of the hairline anteriorly, and thinning or pigmentation of the skin. Pigmentation and weight loss indicate underdosage, whereas increased weight, slowing growth, lowered hairline, and thinning of the skin indicate overdosage (see self-instruction unit, "Glucocorticoid Replacement Therapy," p 65).

The patient should have an identification bracelet or necklace with the diagnosis, "adrenal insufficiency," and specific instructions provided for contacting a *knowledgeable* physician in the event of illness or injury. The patient and his family should learn that in the event of trauma or illness, the usual replacement dose of cortisol should be tripled.

After additional corticosteroid treatment is given for illness, the physician should be consulted about the intercurrent problem. In case of vomiting or coma, the steroid must be given parenterally. If the patient is not in shock, hydrocortisone sodium succinate (Solu-Cortef) or methylprednisolone sodium succinate (Solu-Medrol) should be given intramuscularly in a dose which is at least three times the usual replacement dose. For example, give 100-200 mg Solu-Cortef every six hours until medications can be taken orally or until at least 12 hours after a long-acting intramuscular preparation such as cortisone acetate has been administered. The usual replacement medication should be resumed immediately when the illness begins to abate (see self-instruction unit, practice test questions 1 and 2, p 66).

Sodium-retaining Steroids (Mineralocorticoids)

The normal, endogenously produced sodium-retaining steroid in man is aldosterone. This hormone is not readily available commercially, nor is it needed. The 9α-fluorinated derivative of cortisol, fludrocortisone (Florinef), is available in an oral tablet, is highly potent, has a long half-life, and has minimal carbohydrate activity. The starting dose is 0.05 mg/day (one-half tablet) taken in a single morning dose. No specific dose of sodium is required but a surfeit of sodium in some form should be easily available to the patient. The sodium intake should *not* be curtailed. The dosage of fludrocortisone should be increased gradually until there is no evidence of underdosage or overdosage. The typical adult dose is 0.1 to 0.2 mg/day.

The historical information needed at the time of follow-up visits to regulate the dose of fludrocortisone relates to salt craving, mood, polyuria, polydipsia, and the pres-

ence or absence of headache. The physical examination data needed include blood pressure, pulse rate, body weight, and skin turgor. Certain laboratory procedures may aid in confirming your clinical evaluation. The concentration of potassium in serum and the carbon dioxide combining power are direct indicators of the effects of sodium-retaining hormone. Thus a lack of mineralocorticoid activity results in hyperkalemia and acidosis, and excessive sodium retaining activity is characterized by hypokalemia. Changes in the ECG, degree of hemoconcentration and urea retention, and changes in heart size determined by radiography reflect the underlying loss or retention of sodium and potassium. The presence of salt craving and polyuria or polydipsia suggests the need for additional sodium-retention activity, whereas headache and elevated blood pressure with increasing weight would suggest the need for a lower dosage (see self-instruction unit, "Mineralocorticoid Replacement Therapy," p 65).

Since there is no increased requirement for sodium retention or potassium excretion during the stress of illness or trauma, fludrocortisone requires no modifications for such conditions. If vomiting or diarrhea occurs, then *replacement* intravenous fluids are indicated, but the dose of fludrocortisone need *not* be altered. A parenteral preparation is available (desoxycorticosterone acetate) and should be given in a dose of 2 mg/day (1 mg/day for a child weighing up to about 11 kg, or 25 lb) in a single intramuscular injection until the oral fludrocortisone can be resumed.

Patient Education

The patient and his family must assume a major portion of the responsibility for managing the hypoadrenocorticism. In counseling the patient, the emphasis should be on self-management as well as the life-long nature of this treatment. Another important aspect of management is that the patient should participate in as near normal activity as possible. If the only abnormality with which the patient suffers is a lack of the adrenal hormones, then completely normal activity is possible if treatment is taken as needed.

Replacement Therapy for ACTH Deficiency (Hypopituitarism)

The patient who cannot secrete adrenocorticotrophic hormone (ACTH) will have secondary hypoadrenocorticism. The major difference in the management of these patients in contrast to patients with Addison's disease is that there is no requirement for additional sodium-retaining hormone. The lack of ACTH precludes adequate cortisol secretion, but the continued integrity of the renin-angiotensin-aldosterone system provides normal sodium retention and potassium excretion. Hyperpigmentation is never present in these patients despite their lack or underdosage of cortisol; thus other, more subtle, signs must be used in evaluating the appropriate dose for these patients (see self-instruction unit, practice test questions 3 and 4, p 66).

Pharmacologic Therapy

Concomitant with the use of adrenocortical steroids is the need to treat immunologic and inflammatory reactions and the need to select drugs with minimal (or at least reduced) sodium-retaining and gluconeogenic properties. It has been possible to separate the sodium-retaining activity to a

great degree, but most glucocorticoids tend to have properties which are enhanced or minimized concomitantly. Therefore, the adrenocortical steroid that provides optimum replacement (cortisol) exhibits far too much sodium-retaining and potassium-excreting activity for it to be useful in large doses over prolonged periods of time. Many substituted derivatives of cortisol are available; they produce less sodium retention and can be administered in larger doses without major mineralocorticoid side effects. One synthetic adrenocortical steroid that is commonly used is prednisone (or its derivative prednisolone). The glucocorticoid activity of prednisone is four to five times that of cortisol, whereas its mineralocorticoid effect is minimal. Prednisone has a somewhat longer half-life in plasma (approximately 200 minutes) than cortisol, a property which permits fewer doses each day. Prednisone inhibits the release of ACTH, and by this mechanism decreases the normal hypothalamic-pituitary-adrenal reactions, causing functional hypoadrenocorticism. As with ACTH deficiency, there is no significant inhibition of the normal renal-adrenal relationship so that sodium retention remains normal.

Self-Limiting Diseases

There need be little hesitation in using adrenocorticoids (glucocorticoids) as one part of the management of acute, self-limiting diseases such as rhus dermatitis, serum sickness, or anaphylaxis. Large doses can be given parenterally or orally, maintained at six- to eight-hour intervals until the disease is expected to abate, and then reduced rapidly or discontinued abruptly. The dosage should be several times that for normal replacement; empirically 60 mg/sq M/day of prednisone has been an effective quantity. Patients treated in this way need no precautions regarding adrenocortical dysfunction in subsequent illnesses (unlike Addison's disease or chronic pharmacologic therapy).

Chronic Daily Therapy

Some disease processes are so severe and life-threatening that chronic, daily glucocorticoid therapy is essential. Again, prednisone can be used in a dose of 60 mg/sq M/day, as long as the side effects and complications of this regimen are anticipated. Within three to ten days of this therapy, the patient will exhibit a change in mood, rounding of the face, and leukocytosis. Soon thereafter will follow obesity, growth arrest (in children), lanugal hair, thinning of the skin and striae, hypertension, and perhaps localized monilial infections. With prolonged therapy (months), psychosis, encephalopathy, decreased muscle mass, bacterial infections, gastrointestinal bleeding, or anasarca may develop. In addition to these problems, all patients will have a suppressed hypothalamic-pituitary-adrenal system so that *after* therapy is reduced or discontinued it will be necessary to provide adjunctive replacement therapy for illness or surgery for up to one year, or until normal function has been demonstrated chemically.

Since most of the side effects above are dose dependent, the physician should *reduce* the dose to the lowest possible amount that is compatible with the patient's survival and reasonable well-being. For example, if it is possible to use other therapy in conjunction with the steroid and to obtain a lower dose of steroid thereby, there will be fewer side effects.

Alternate Day Therapy

Most of the severe side effects of glucocorticoid therapy can be minimized if the patient will tolerate single, large, oral doses of steroid on alternate mornings. The prolonged biologic effects maintain the therapeutic effectiveness, and the low plasma levels for at least 12 hours induce fewer side effects. If a patient's disease requires 60 mg/sq M/day of prednisone, it is reasonable to try 120 mg/sq M/alternate day *in the morning*. By the second night, the hypothalamic-pituitary-adrenal inhibition is absent because the plasma prednisone concentrations are now quite low. The dosage should be reduced until the minimum required dose is found. With this regimen, children may continue to grow at a near normal rate; the side effects are minimized while the therapeutic effect is maintained. This regimen has been a major step in improving the usefulness of glucocorticoids in therapy.

Regardless of the therapeutic indication, if a patient is to receive chronic adrenal steroid medication, chronic and acute infectious diseases, especially tuberculosis, must be looked for and treatment begun before steroid therapy is initiated. The side effects must be watched closely and the dosage should be altered downward as much as possible. The major indications for increasing the dose are (1) a worsening of the underlying disease, (2) preparation for surgery, or (3) response to major physical stress (see self-instruction unit, practice test questions 5, 6, and 7, p 66).

Preoperative Management

Preparation for major surgical procedures in patients without pituitary function, without adrenals, or with suppressed hypothalamic-pituitary activity consists of establishing a high concentration of plasma cortisol or other glucocorticoid that will be maintained during surgery and in the immediate postoperative period.

Cortisone acetate is the best drug to use because of its long biologic half-life when given intramuscularly. The dose is 100 to 200 mg/day, given as a single intramuscular injection, and beginning at least 18 hours before surgery. This repository steroid should be continued at daily intervals until the oral route is reliably available. With brief surgical procedures, intramuscular hydrocortisone sodium succinate (Solu-Cortef) may be given at four-hour intervals until the oral route can be resumed.

For patients who cannot make aldosterone (for example, adrenalectomized patients), the oral fludrocortisone will usually suffice for short procedures if there is no postoperative gastrointestinal distress. For more prolonged procedures, the medication should be changed to desoxycorticosterone acetate (DOCA) in oil (Percorten) 2 mg/day in a single daily injection (see self-instruction unit, practice test questions 8, 9, and 10, pp 66-67).

Acknowledgement

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Self-instruction unit

The following material constitutes a self-instructional unit. At its completion you should be able to manage patients with Addison's disease and hypopituitarism, and those who are receiving pharmacologic doses of glucocorticoids. The management should include selection of drug, calculation of dosage, determination of route and frequency of administration, and the modifications necessary for operative procedures. You shoud be able to adjust the dosage and anticipate the side effects of glucocorticoids and mineralocorticoids.

Glucocorticoid Replacement Therapy

Dosage	Symptoms	Signs	Laboratory
Deficient	Weakness	Weight Loss	Nonspecific
	Depression	Hyperpigmentation	
	Anorexia	Low blood pressure	
	Headache	Postural hypotension	
	Nausea and vomiting		
Excessive	Euphoria	Weight gain	Nonspecific
	Weakness	Decreased growth rate	
	Polyphagia	Rounding face	
		Lowering hairline anteriorly	
		Thinning of skin	

Mineralocorticoid Replacement Therapy

Dosage	Symptoms	Signs	Laboratory
Deficient	Salt craving	Weight loss	Hemoconcentration
	Irritable mood	Tachycardia	Hyperkalemia
	Polydipsia	Small heart	↑T on ECG
	Polyuria	Low blood pressure	↓Renal function (GFR)
		Postural hypotension	
		Dry skin and membranes	
Excessive	Headache	Weight gain	Hemodilution
		Hypertension	Hypokalemic alkalosis

See next page for practice test

Practice Test

True or False:

1. A 19-year-old man with well controlled Addison's disease reports by telephone (at 8 am) that he has a fever (101 F), sore throat, and earache, and that he has taken 600 mg of acetominophen. You should give him an appointment for the early afternoon and arrange for a complete blood count and plasma electrolytes.

True_____ False_____

2. The plasma half-life of intramuscularly administered hydrocortisone sodium succinate may be inferred to be approximately 90 minutes.

True_____ False_____

3. Which one of the following groups of signs, symptoms, and laboratory results from a patient who receives mineralocorticoid hormone therapy is consistent with either overdosage or underdosage?

a. Rapid weight gain, pedal edema, headache, hyperkalemia, and increasing heart size.

b. Excessive thirst, postural hypotension, oliguria, low blood pressure, hyperkalemia, uremia, decreasing heart size.

c. Headache, weight loss, hypokalemia, anemia, increasing heart size.

d. Weight loss, polyuria, salt-craving, hyperkalemia, hemoconcentration, decreasing heart size.

4. Fill in the blanks:
A man of 1.7 sq M surface area (70 kg) with Addison's disease would require _____ mg of _____ by mouth every _____ hours as his glucocorticoid hormone and _____ mg of _____ by mouth every _____ hours as his sodium-retaining hormone.

5. Endogenous ACTH release from the pituitary is only temporarily inhibited by short-term (one week), high dose (60 mg/sq M/day), daily prednisone therapy.

True_____ False_____

6. Chronic, daily, high-dose prednisone therapy (weeks to months) rarely results in complicating side effects.

True_____ False_____

7. Alternate day therapy is possible because of the discrepancy between the plasma half-life and the biologic half-life of prednisone.

True_____ False_____

8. Present the complete management plan for an 18-year-old woman with diagnosed and previously treated Addison's disease (total hypoadrenocorticism). You should include the medications, dosages, interval of follow-up visits, and plans for education of the patient.

9. Present the steroid management for elective major surgery in a 12-year-old male with previously diagnosed and treated hypopituitarism due to a craniopharyngioma.

10. Plan steroid withdrawal from a 40-year-old woman with moderate rheumatoid arthritis who has been receiving 15 mg prednisone by mouth daily for six months. Include a contingency plan for exacerbation of her disease during withdrawal.

See next page for answers

Practice Test—Answers

1. False. The patient needs additional glucocorticoid hormone because of the infection. Appropriate management would include advising the patient to treble his morning dose of cortisol, to repeat the dose at noon, and to come to your office at the first available time (afternoon is acceptable). He may need a complete blood count, but only if you would order the test for a similar illness in a non-addisonian patient. There is no reason to obtain plasma electrolytes because there is no unusual loss of fluids or electrolytes, and because additional sodium-retaining hormone is not required during the stress of an infection.

2. True. Hydrocortisone sodium succinate is rapidly hydrolyzed to free cortisol and therefore the plasma half-life is similar to the endogenously secreted hormone.

3. d. In a, the hyperkalemia does not go with the signs and symptoms of too much sodium retention. In b, the oliguria would not occur with the signs and symptoms of aldosterone deficiency *except* in the final stages when blood volume and glomerular filtration had decreased to near terminal conditions. In c, the weight loss is unexpected with the other definitive evidence of excessive sodium retaining hormone.

4. Glucocorticoid: cortisol, 50 mg/day divided into about 15-20 mg at eight-hour intervals. The regimen might be 25 mg in the morning, 12.5 mg in the early afternoon, and 12.5 mg at bedtime. Mineralocorticoid: fludrocortisone, 0.2 mg daily by mouth. It should be started at a dose of 0.05 mg daily and then increased at weekly intervals until the optimal dose (usually 0.2 mg daily) is reached. Alternatively, the patient could take desoxycorticosterone acetate (DOCA) intramuscularly in a dose of approximately 2 mg/day.

5. True. However, sometime between 10 and 30 days of treatment the inhibition becomes more of a problem and may require up to 90 days to recover fully. Thus, patients treated for longer than one week should be regarded as ACTH-inhibited with regard to stress for at least three months.

6. False. Such therapy routinely results in severe side effects.

7. True. The long duration of glucocorticoid activity after the plasma concentration of prednisone has decreased to insignificant levels permits alternate-day oral administration without major impairment of the ACTH release in response to illness or other stress.

8. The treatment should include cortisol 25 mg/sq M/day—about 40 mg/day for an average size woman, given by mouth in three divided doses at approximately equal intervals. For sodium retention she will need fludrocortisone, 0.1 to 0.2 mg daily, in a single oral dose. The patient should be taught to increase her dose of cortisol at least twofold with minor illness and at least threefold with more serious illness or accident. She should be given a prescription for hydrocortisone sodium succinate (Solu-Cortef) with directions to take 200 mg intramuscularly in case of vomiting. The early follow-up visits should

be no more than two weeks apart until the exact dosage for this patient is established and her understanding of the management of her disease is assured. Thereafter, follow-up every 6 to 12 months is usually adequate.

9. Cortisone acetate 100 mg intramuscularly at least 18 hours prior to the planned surgery. The dose should be repeated on the day of surgery, and then every third day until the oral route can be relied upon. If major surgery must be done without adequate time for preparation, then give hydrocortisone sodium succinate (Solu-Cortef), 100 mg intramuscularly, before, and every four hours during and after, surgery. If cortisone acetate is given *also* just prior to surgery, then the Solu-Cortef can be discontinued after 24 hours.

10. In a patient who is suffering from an inflammatory disease process the dose of prednisone should be reduced very slowly, for example, by one-half tablet (2.5 mg) every seven to ten days until symptoms begin to recur. Continue at that dose level if there is no major exacerbation, and then resume the *slow* decrease in dosage after the patient's condition has stabilized. If there is a major flare-up of her disease, go back to the original dose and, after control, decrease the dose more slowly. Remember that this patient probably has no ACTH release and therefore the stress of even minor illness should be treated with a temporary increase in dose (to two or three times replacement) for a day or two, and then the pre-stress dose resumed. Another approach is to change to alternate-day therapy, gradually increasing the dose on one day, and decreasing the dose on the next day until the alternate day regimen is accomplished. The dosage can then be reduced in very small decrements as noted for daily therapy.

The author would appreciate physicians' comments about this article. Your opinions as to (1) the level of the presentation, (2) the format, (3) its usefulness to you as a learning exercise, (4) its usefulness to you in treating patients with adrenal steroid hormones, and (5) suggestions for future articles will be most valuable. Please forward your evaluation (signed or unsigned) to Dr. Bryan, Department of Pediatrics, The University of Texas Medical Branch, Galveston, TX 77550.

Dr. Bryan, Associate Dean for Curricular Affairs, The University of Texas Medical Branch, Galveston, TX 77550.

Spontaneous rupture of the small bowel

Charles Oswalt, MD; A. B. Cruz, Jr., MD, MS (Surg)

Perforations of intra-abdominal viscera are not uncommon; however, when one excludes perforations secondary to trauma, peptic ulcer disease, obstruction, or ischemia, the incidence is less. Even more uncommon are the so-called spontaneous perforations in the small intestine. We present one such case, and a brief review of the literature.

Case Report

A 54-year-old Mexican-American man presented with abdominal pain that had been present for 36 hours. He had been squatting to pick up a lawn mower when he felt "a little explosion" inside his abdomen, and then fainted. Upon regaining consciousness, he felt constant, burning abdominal pain, mostly in the lower portion of the abdomen. He went to bed and came to the hospital the next day; he also began having fever and vomited twice.

The patient's history included a left inguinal herniorraphy when he was a young man and a vagotomy and antrectomy four years before admission. Eleven months before admission he underwent an enterolysis for small-bowel obstruction. He was in good health at the onset of his illness.

Physical examination revealed a moderately obese middle-aged man in acute distress with obviously severe abdominal pain. His blood pressure was 142/100 mm Hg, temperature 101.4 F, and pulse rate 120/minute. Pertinent physical findings were limited to the abdomen. It was distended, mildly tender to palpation without localization, and quiet. There was minimal guarding and equivocal rebound tenderness. No hernias were present.

Results of laboratory examinations included: hemoglobin, 15 gm/100 ml; white blood cell count, 20,900/cu mm, with 87% neutrophils, 11% lymphocytes, and 2% monocytes; serum electrolytes, within normal limits; glucose, 158 mg/100 ml; blood urea nitrogen, 13 mg/100 ml; and serum amylase, 73 Somogyi units. Results of urinalysis and electrocardiogram were unremarkable. A chest x-ray revealed clear lung fields with no free subdiaphragmatic air. X-rays of the abdomen revealed a loop of small bowel, possibly dilated, in the left upper quadrant, and a large amount of feces in the colon. No fluid levels were present.

Proctoscopic examination showed no abnormalities. After admission, treatment with nasogastric suction and intravenous fluids was begun, along with intravenous antibiotics. When the patient's abdominal symptoms became worse and his clinical condition failed to improve, an exploratory laparotomy was performed.

The contents of the peritoneal cavity were encased in dense adhesions. During the exploration, several kernels of corn were found and removed. Two small interloop abscesses were encountered before a well-formed abscess, 8 cm in diameter, was found around a 1.5 cm ileal perforation. The abscess cavity contained many corn kernels. The segment of ileum looked normal with no evidence of intrinsic pathologic changes. The area of perforation was excised, the defect was closed in two layers, and Penrose drains were left in the abscess cavity. Pathological examination of the excised small bowel wall revealed normal small bowel tissue with peritoneal inflammation. The patient did well postoperatively and left the hospital on the seventh postoperative day.

Discussion

In this case, the history is typical of patients who suffer a spontaneous perfora-

tion of the small bowel. Wilensky and Kaufman[7] reported patients having an average age of 48, although the average age of Mason's four patients[5] was 65. The victims are usually healthy males engaged in strenuous labor. They experience sudden, excruciating abdominal pain followed by nausea and vomiting. The pain subsides quickly, so many victims resume work for a few hours. Almost none seek medical assistance for several hours, until peritoneal irritation makes their pain unbearable.

We feel that our case is almost certainly an example of small-bowel perforation caused by the combination of adhesions and muscular effort producing a sudden increase in intra-abdominal pressure. Although the possibility of the corn kernels serving as foreign bodies can be raised, this is highly unlikely. Adhesions and muscular effort are mentioned as etiological factors in most articles on small-bowel perforations, but there are few reported cases which do not have other causative factors involved.

Markowitz[4] reported 27 cases of less common causes of perforations, including foreign body, tuberculosis, ulcerative colitis, lymphoma, regional enteritis, diverticulum, steroids, and carcinoma. He reported no instances of perforation caused by adhesions.

Gremmel and Thum[3] reviewed 46 patients with small-bowel perforations from various causes, none of which were related to adhesions or muscular effort. In contrast to Markowitz, who had one such case, they found no idiopathic perforations.

In 1937, Wilensky and Kaufman[7] collected 42 cases, mostly from the 19th century, of perforations secondary to muscular effort. They theorized that the presence of an inguinal hernia predisposed these to rupture. However, as details were seldom available from those cases, most of their review and their assumptions should probably be disregarded.

While reviewing 50 cases of spontaneous small-bowel rupture which could not be attributed to any pre-existing local pathological factor, Mason[5] found only four perforations which were not associated with hernia and bowel injury on the antimesenteric border. He suggested that these four could have been caused by adhesions, and reported two other cases which were not caused by hernia or adhesions, or both.

Eiss and Chuapoco[1] reported a case of a spontaneously perforated jejunum without evidence of local pathological changes. After an extensive review of the literature, they found only one other, reported by Markowitz,[4] which they would accept as a true spontaneous rupture of the small bowel. They excluded perforations occurring with muscular effort, and those related to adhesions and hernias. Their case, however, probably was not truly spontaneous, as the patient certainly had many adhesions after having a perforated duodenal ulcer repaired and a subtotal gastrectomy and cholecystectomy performed after her ulcer recurred. Moreover, there was no mention of her activity at the time of the catastrophe.

Though Farooki[2] lists undue strain and adhesions as common causes of spontaneous small intestinal (excluding duodenal) perforation, none of his 22 reported cases were attributed to either cause. He did list four cases as being due to unknown causes but gave no details about them.

Rose and Fowler[6] reported six cases of spontaneous small bowel perforations, two of which occurred in grossly normal small bowel. They speculated that the perfora-

tions were secondary to primary nonspecific ulcers of the small intestine.

There seems to be general agreement that small-bowel perforations can be caused by adhesions and strenuous labor; nevertheless, we found a paucity of reported cases which could be attributed to these causes with a good degree of confidence. There were a few other cases with obscure causes, and they conceivably could have been the result of one or both of these factors. With this report, the number of reported cases of small-bowel perforations secondary to adhesions and muscular effort amounts to six as far as we can determine. Five reported cases are currently unexplained.

Summary

A case of small-intestine perforation, most probably related to the combination of adhesions and muscular effort, is presented. A review of the literature is presented. After critical consideration, only five other reported cases which could be related to these factors with confidence were found. Five other cases of small-bowel perforations with no obvious cause were found in the literature.

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Dr. Oswalt, Chief General Surgery Resident, Bexar County Hospital, 4502 Medical Drive, San Antonio, TX 78284.

Dr. Cruz, Professor of Surgery, University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, TX 78284.

Reprint requests to Dr. Cruz.

The changing profile of medical education in Texas

G. V. Brindley, Jr., MD

Many facets of medical education are changing dramatically. There was a great resurgence of interest in and financial support of biomedical research after World War II. Federal grants to medical schools for research were allocated in increasing amounts until they constituted up to a third of the income of some schools. This research resulted in many important discoveries and refinements in the annals of science. During this "golden era," capitation and construction funds were relatively available, with few governmental restraints.

This was the dramatic period of sensational attainment and forecasts of imminent solutions of most of the problems of health. Eager young students sought careers in the exciting specialties, and the numbers of graduating students entering primary care diminished. Also, most of these new physicians elected to live in affluent urban communities. Several federal and state studies indicated the need for additional medical schools and the expansion of existing schools. Availability of federal funds became partially contingent upon this expansion.

Rapid escalation of social welfare programs, changing national goals and priorities, and increasing bureaucratic regimentation and control have resulted in a vastly different medical education model. Perhaps, in this era that constantly demands instant results, too much was anticipated from biomedical research. Research funds have been drastically reduced, seriously handicapping our medical schools. With unwarranted haste, medical schools were ordered to graduate more students, in less time, with controlled undergraduate and graduate curricula responsive to social demands, and to involve students, consumers, and government in the entire mechanism.

Let us take a look at medical education in Texas. The Coordinating Board, Texas College and University System, made two intensive studies of medical education in Texas. At the time of the first study, in 1968, Texas had four schools of medicine with an entering enrollment of 408 students. That year, 321 students were graduated from these institutions. State appropriations to support operating expenses of the public medical schools and health science centers were slightly over $46.3 million. Records reveal there were 11,463 physicians practicing in Texas in 1968, a ratio of 1 physician per 968 of population. Major recommendations of the Coordinating Board at that time were: increased enrollment in The University of Texas medical schools, a new University of Texas medical school in Houston, a new medical school at Texas Tech University, and subsidization by the state for each Texas resident enrolled as a student at Baylor College of Medicine.

An extensive second study of medical education was completed in October 1974. Significant recommendations made at that time included the following:

"The State of Texas will be able to meet current demands for medical and dental manpower if trends of the past six years continue, and if the present approved medical and dental schools are expanded to their currently approved optimum capacities. Therefore, no new medical or dental schools are recommended at this time.

"Medical education, undergraduate and graduate, should be planned to decrease significantly dependence upon foreign medical schools for provision of health care within the State of Texas.

"Increased State of Texas support is recommended to continue augmentation of primary care education in all Texas med-

ical schools for undergraduate medical students, and resident physicians in hospitals and in other clinical facilities.

"The State of Texas should provide immediate funding for House Bill 683, the State Rural Medical Education Act, passed by the 63rd Legislature.

"Other funds should be made available for tuition and/or scholarships for students from areas without adequate medical and dental professionals who will agree to return to practice in places of health care shortage.

"Financial and other incentives should be considered for physicians and dentists, recently graduated from medical and dental schools, who will agree to practice in underserved central cities or rural areas.

"Increased numbers of applicants to medical and dental schools should be actively stimulated from well prepared women and minority group members.

"Probability of minority students and those from smaller community high schools successfully meeting the academic and emotional demands of rigorous medical and dental education programs should be increased by instructional techniques and support services to accommodate different rates of learning, increase reading and study skills, and overcome deficiencies in academic preparation.

"Student loan programs and increased financial assistance in the form of scholarships and fellowships should be made available to needy minority group medical and dental students.

"The State of Texas should establish a sustained level of fiscal support for medical and dental education, including costs of research, clinical training, teaching hospital differentials, administration and planning and production of staff programs of continuing education for health practitioners.

"Educational components of teaching hospitals, rural and urban, viewed as state training resources, should be financed by state funding, taking into account the differential cost in health care when hospitals are utilized for medical and dental education functions."

1. Freshman class sizes of medical and osteopathic schools in Texas, 1963-1975.

School	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Baylor	84	84	84	84	84	84	92	124	144	168	168	168	168
Texas College of Osteopathic Medicine	---	---	---	---	---	---	---	20	32	51	54	60	72
Texas Tech	---	---	---	---	---	---	---	---	---	36	38	40	40
University of Texas:													
Dallas	100	100	100	106*	109*	105	107	113*	122	128	152	200	202
Galveston	154	152	155	162*	164*	163	168	177*	175	204	205	205	203
Houston	---	---	---	---	---	---	---	19†	32	49	48	52	63
San Antonio	---	---	---	15†	7†	56	104	105	113	116	122	122	128
Total	338	336	339	352	357	408	471	539	618	752	787	847	876
No. Increase		-2	3	13	5	51	63	68	79	134	35	60	29
% Increase		-0.59	0.89	3.83	1.42	14.29	15.44	14.44	14.66	21.68	4.65	7.62	3.42

Total No. Increase 538
Total % Increase 159.17

Includes repeaters and transfers.
*Includes students from San Antonio in 1966 and 1967, and from Houston in 1970.
† Counted in other schools' totals.
Source: Staff of Coordinating Board, Texas College and University System, based on figures from each school.

By 1975 the medical education structure had changed considerably. The number of medical schools in operation had increased to six, with the addition of Texas Tech University School of Medicine and The University of Texas Medical School at Houston. By this time also, the Texas A&M/Baylor College of Medicine Medical School, was under development. The Texas College of Osteopathic Medicine became a state-supported institution by a merger with North Texas State University.

Entering class enrollment in Texas medical schools for the 1975-76 academic year rose by more than 115%, from 408 in 1968 to 876 in 1975 (Figs 1 and 2). This year, 749 graduates are expected to receive the MD or DO degree, 428 more than in 1968, for an increase of 133%. Between 1972 and 1980, Texas medical schools will have graduated 6,443 new physicians, a number almost equal to the

2. Projections of freshman class sizes of the medical and osteopathic schools in Texas, 1976-1980.

School	1976	1977	1978	1979	1980
Baylor	168	168	168	168	168
Texas A&M-Baylor		32	32	32	32
Texas College of Osteopathic Medicine	72	72	72	72	112*
Texas Tech	40	40	100	125	125
University of Texas:					
Dallas	200	200	200	200	200
Galveston	203	203	203	203	203
Houston	100	100	100	100	200
San Antonio	128	128	200†	200†	200†
Total	911	943	1,075	1,100	1,240

*Reaching the projected 112 in its entering class will be dependent upon completion of a basic health sciences building on TCOM's Fort Worth campus.
† To reach its estimated goal of 200 entering students, San Antonio needs an additional 400,000 sq. ft.
Source: Staff of Coordinating Board, Texas College and University System, based on projected figures from each school.

4. Physicians licensed to practice in Texas, 1968-1975.

Year	MD's Texas Schools	MD's Out-of-State Schools*	DO's	Foreign MD's	Total
1968	316	350	47	148	861
1969	289	489	47	158	983
1970	341	452	55	167	1,015
1971	311	516	43	215	1,085
1972	302	612	45	207	1,166
1973	441	685	41	282	1,449
1974	536	620	64	370	1,590
1975	516	712	60	487	1,775
Total	3,052	4,436	402	2,034	9,924

*These figures include graduates of out-of-state medical schools who obtain Texas license either by examination or reciprocity.
Source: Texas State Board of Mediccal Examiners.

3. Physicians graduated from Texas medical and osteopathic schools, 1966-1975.

School	1966	1967	1968	1969	1970	1971	1972*	1973	1974	1975	1976
Baylor	83	79	85	85	88	89	83*	111	226†	133	176
Texas College of Osteopathic Medicine	---	---	---	---	---	---	---	---	18	25	48
Texas Tech	---	---	---	---	---	---	---	---	24	41	42
University of Texas:											
Dallas	83	95	97	96	107	109	102	114	112	132	138
Galveston	119	150	139	138	148	133	150	165	190	172	186
Houston	---	---	---	---	---	---	---	---	52‡	42	49
San Antonio	---	---	---	---	33	30	71	101	96	110	121
Total	285	324	321	319	376	361	406	491	718	655	760

*Plus one awarded posthumously.
† Includes 47 graduates in September 1973; 34 in December 1973; 145 in May 1974.
‡ Includes 22 graduates in December 1973; 30 in June 1974.
Source: Staff of Coordinating Board, Texas College and University System.

total number of Texas graduates in Texas prior to Dec 31, 1972.* (Fig 3 shows number of Texas graduates from 1966 through 1975.) Furthermore, the state licensed 1,775 new doctors in 1975 (Fig 4).

Appropriations for the support of Texas public medical schools and health related units increased $248.8 million over 1968 appropriations, an increase of nearly 450%. In addition, large capital outlays have been required for developing medical school facilities. For example, the legislature authorized Texas Tech University to sell $35 million worth of tuition revenue bonds to construct and equip the Texas Tech University School of Medicine. In addition, for the Regional Area Health Education Centers in Amarillo and El Paso, the legislature has appropriated $3.4 million. Planning funds were appropriated for another center in the Permian Basin area. Also, to reach its estimated goal of 200 entering students, The University of Texas Medical School at San Antonio requires additional space. On July 9, the UT Regents approved a $10.7 million construction project to expand The University of Texas at San Antonio Health Science Center to accommodate an entering class of 200 medical students. The Texas College of Osteopathic Medicine will need additional space appropriations for a basic health sciences building on its Fort Worth campus before it can increase its enrollment to 112, as was projected at the time of its merger with North Texas State University.

A medical education program will be initiated in January 1977 by Texas A&M University, in conjunction with Baylor College of Medicine and the Veterans Administration, to accept 32 students at the junior level as first-year medical students. Expansion of the program will take place as needed and practicable. However, federal funds allotted to the program will decrease on a sliding scale during the next seven years, necessitating increased state expenditures. In addition, to ensure further that an adequate number of Texas physicians enter practice each year, Baylor College of Medicine is provided with state subsidies of approximately $22,300 per Texas resident student. In fiscal year 1976 these Texas students numbered 445, and their state appropriation was $9.7 million.

In 1974 there were 13,792 practicing physicians in Texas, thus improving the physician/population ratio to 1:873. This ratio should be further improved substantially if currently projected expansions of Texas medical schools can be achieved through increased state appropriations, particularly for capital outlay in building programs.

In order to retain our medical school graduates in Texas and to help ensure a future supply of physicians we must provide an increased number of graduate training positions. In recent years, Texas has not been able to make available as many first-year graduate training positions as there were Texas graduates. In 1973, 471 first-year residencies were offered, compared with 491 Texas MD graduates. The picture did not improve in 1975, when 639 first-year residencies were offered for 630 graduates. In 1976, 741 first-year training positions were available for 712 MD graduates. There is an acute shortage of first-year positions in family practice programs. While medical school graduates have shown increasing interest in family practice, these training programs have not expanded sufficiently to meet the demand.

*As of Dec 31, 1972, there were 10,268 graduates of Texas medical schools practicing in the US. Of these, 6,952 (67.7%) were in Texas.

The Texas Medical Association's ad hoc committee on funding residencies has been conducting an in-depth study on the shortage of residencies in Texas and has recommended a significant increase in the number of training programs in family practice. The committee expects to make specific recommendations in September. New ones are under development at Wichita Falls, Corsicana, Port Arthur, Beaumont, Conroe, Rosenberg, and Richmond. In his Special Report on Graduate Education to The University of Texas System, Dr. Edward N. Brandt, Jr., Dean of Medicine, The University of Texas Medical Branch at Galveston, estimated that by 1985, Texas should have 300 first-year (900 total) positions in family medicine and 400 first-year (1,200 total) positions in the other primary care fields of pediatrics, internal medicine, and obstetrics/gynecology. To reach this goal will require the creation of 220 new first-year (660 total) positions in family medicine and 110 new first-year (330 total) positions in the other primary care fields.

The State of Texas does not provide any direct financial support for graduate training programs, and nine of the current programs have annual HEW training grants that will expire in the next two to three years. As the number of medical school graduates increases, as is projected for the next few years, it may become increasingly necessary for Texas graduates to leave the state for their graduate training unless some means are found to fund at least the educational component of residencies. By 1981, more than 170 additional first-year graduate training positions will be needed if we are simply to be able to offer each graduate one position. If these efforts are fully funded by 1980, nearly 1,000 physicians should be graduated annually, with an even greater number entering our medical schools.

The crucial needs at this time seem to be adequate funding of our existing medical schools, particularly for new construction to permit expansion of entering classes, and state financial support for the educational component of graduate training programs, especially in the primary care specialties. All of the studies I have seen make it clear that we do not need, and cannot afford, any more medical schools at this time or in the immediately foreseeable future.

Dr. Brindley, Scott and White Clinic, Temple, TX 76501.

Suppressor T cells and autoimmune disease

Frank M. Orson, BA

Recent research has demonstrated a prominent regulatory role for suppressor T cells in the control of immune responses. In some experimental models of autoimmune disease, dysfunction of these T cells has been implicated as an etiologic factor. In New Zealand black and New Zealand black/white mice, declining levels of suppressor T cells, as measured by graft versus host reactions, is associated with increasing manifestations of autoimmune phenomena. This has important pathophysiological and therapeutic implications for human autoimmune disease.

The immune system has been deservedly recognized as a complex interaction of multiple factors and processes which serve to protect the body from invasion by bacteria, fungi, viruses, neoplastic cells, and other foreign matter. To prevent injury to the body itself from the destructive processes used to achieve this end, the immune system clearly must be able to distinguish between that which is foreign and that which is not. For example, in a transfusion reaction, human erythrocytes are recognized and rejected by the antibodies of a person whose blood type is different from that of the donor. Yet his own erythrocytes normally remain undamaged even though they differ from the destroyed cells only by surface macromolecules having as little as a single different carbohydrate moiety in the ABO system. As an example requiring cellular recognition, immunosuppression of a kidney transplant recipient is necessary despite the tests performed to match as closely as possible the histocompatibility antigens of the donor and recipient. Some transplants are successful with these precautions and treatments, but in other cases, the immune system destroys this physiologically necessary organ because of minor histocompatibility differences present on the cell surfaces. There have been numerous theories postulated to explain the mechanism of this rejection of foreign antigens and the simultaneous tolerance of self-antigens, which are molecules capable of inducing an immune response in a different host. These range from the clonal deletion theory of Burnet and Fenner[1] proposing that cells capable of responding to self-antigens were eliminated during fetal life, to more recent ideas proposing that competence to respond is always present but is actively and continuously inhibited under normal circumstances by regulatory functions of the immune system.[2,3] Although the active suppression theory has been recently in vogue, other data indicate possible irreversible suppression (actually, or effectively, deletion of the responding cells) for at least some part of the virtually limitless antigenic spectrum faced by the immune system.[4] In any case, an adequate theory must be able to accomodate the fact that this system of self-tolerance does not always function perfectly, perhaps secondary to a viral mechanism, so that response to some self-antigens does occasionally take place, giving rise to what is now called autoimmune disease (Fig 1).

Pathophysiology of Autoimmune Disease

The pathophysiology of autoimmune disease may be divided simply into its physiology (that of the normal immune system) and its pathology (that abnormal process allowing the system to respond to antigens ordinarily unrecognized, those of the host organism itself). Thus, abnormal immune responses may be classified identically to normal responses, as humoral or cell-mediated. There are two basic categories of immune cells: bone marrow-

derived cells (B cells) and thymus-derived cells (T cells). Classically, the former are responsible for antibody production and the latter for cell-mediated response, but it is now well known that T cells have a complex regulatory function affecting both classes of immune response. In particular, helping functions which boost responses and suppressor functions preventing initiation or proliferation of responses have been well described.[5] Accumulating evidence indicates that for at least a portion of autoimmune diseases, the pathological process may be based on defects in this regulatory function of T cells.

Considering first the humoral half of the immune system, antibodies to self antigens can be detected easily in a percentage of the general population. However, the presence of these antibodies to self does not always imply disease in the clinical setting. For example, in one series, 16% of clinically normal people had detectable serum levels of antinuclear antibody (ANA),[6] the presence of which in systemic lupus erythematosus (SLE) is thought to cause one of the most serious manifestations of that disease, lupus nephritis. In the case of SLE, antibodies have specificity for DNA which is present in the circulation due to cell lysis of uncertain cause. The antibodies bind to fragments of DNA in the plasma, and these antigen-antibody complexes are filtered by the kidney. Since their size is relatively large, they become trapped in the basement membranes of the glomerular cells. Trapped immune complexes then fix the proteins of the complement system which produce chemotactic and inflammatory agents. The resulting inflammation damages the glomerulus, an innocent bystander in the inflammatory reaction. Although this damage is probably the most dangerous in the SLE syndrome, there are many other antibodies produced which are directed against self-antigens in SLE (Fig 2). Some of these are directed against cell surface antigens which may produce clinical abnormalities as a direct result of their specificity (for example, antierythrocyte antibodies may cause autoimmune hemolytic anemia).

Some other autoimmune diseases also result directly from the specificity of the immune response for self-antigens, such as Hashimoto's thyroiditis, pernicious anemia, and Goodpasture's syndrome. Goodpasture's syndrome is a disease with both renal and pulmonary manifestations.[7] These manifestations are pathophysiologically related because the lung lesion, which precedes the renal complications, sensi-

1. Postulated autoimmune diseases of man (partial list).

Idiopathic acquired hemolytic anemia
Idiopathic thrombocytopenic purpura
Hashimoto's thyroiditis
Idiopathic hypoadrenalism
Goodpasture's syndrome
Multiple sclerosis
Primary biliary cirrhosis
Systemic lupus erythematosus
Sjögren's disease
Rheumatoid arthritis
Ulcerative colitis
Pernicious anemia

2. Selected autoantibodies detected in systemic lupus erythematosus.

Anti-DNA-nucleoprotein antibodies
Rheumatoid factor
IgM cryoglobulins
Antithyroglobulin antibody
Antithrombin antibody
Antierythrocyte antibodies
Antiplatelet antibodies
Antileukocyte antibodies

tizes the immune system by acting as an antigen that cross-reacts with a glomerular basement membrane antigen.[8] When sufficient quantities of antibody are bound, complement is fixed and the inflammatory cycle characteristic of complement-mediated immune processes is initiated: direct damage from the components of complement ensues while split products of the binding sequence, especially of C3 and C5, act as vasoactive and chemotactic agents for granulocytes and macrophages which infiltrate the tissue to complete the acute inflammatory process.[9]

Analysis of these complement-mediated lesions in the kidney has produced a means of distinguishing the one caused by antigen-antibody complexes from that due to specific antibody by immune fluorescence staining.[10] Antibodies are raised in the rabbit against human immunoglobulin, and then linked to a fluorescent moiety such as fluorescein or tetramethylrhodamine. When tissue slices are exposed to this antiserum, the antibodies are bound wherever autologous immunoglobulins are present in the tissue. In the case of the complexes, the fluorescent picture is one of discrete accumulations along the basement membrane, described as "lumpy-bumpy." When antigen specificity is present, however, a smooth linear deposition of immunoglobulin is indicated along the inner surface of the glomerular basement membrane. The end result of either process is chronic glomerulonephritis terminating in renal failure.

Cell-mediated immune responses have not been clearly implicated as a cause of human autoimmune disease. However, the pathology of several diseases, including Hashimoto's thyroiditis, idiopathic hypoadrenalism, and idiopathic hypoparathyroidism characteristically includes a lymphocytic infiltrate which is consistent with a cell-mediated process. Cell-mediated immunity exists to thyroid and adrenal antigens in these syndromes,[11] and the clinical severity of the disease does not correlate well with the levels of autoantibodies present in the serum. There is some evidence of a role for cell-mediated immunity in Goodpasture's syndrome as well,[12] although the level of autoantibody to the glomerular basement membrane antigens is more closely associated with the clinical state than in the other three syndromes.

In animals, however, some experimentally induced diseases are clearly a result of cell-mediated immunity. Experimental allergic encephalomyelitis, a disease resembling both acute disseminated encephalomyelitis and multiple sclerosis, can be produced by injecting emulsified tissue from the central nervous system into an animal.[13] The resulting histopathology, a mononuclear infiltrate around the venules and small veins of the brain and spinal cord, is similar to that typical of delayed hypersensitivity reaction (a purely cell-mediated phenomenon). Furthermore, this disease can be transferred between animals of the same strain by lymph node cell injection, but not by serum injection. Autoantibodies to CNS tissue are present, but by themselves they cannot cause the disease; in fact, they may be somewhat protective by inhibiting cellular recognition of the CNS antigens by covering them with immunoglobulin molecules. The end result of this cell-mediated immune process, as in multiple sclerosis, is paralysis, often leading to death.

Animal models in which to study diseases (Fig 3) are obviously of great benefit in the progress toward understanding the pathophysiology and therapy of human disease. In New Zealand, an inbred strain

of mice characterized by a premature mortality from anemia, hepatosplenomegaly, and jaundice, was developed for cancer research. This strain, the New Zealand black (NZb), had autoimmune hemolytic anemia,[15] and thus became the first known experimental animal to spontaneously develop an autoimmune disease. Furthermore, hybrids of NZb mice with mice of other strains exhibit a wide variety of autoimmune phenomena, some with characteristics similar to those of the NZb strain, but others with potentially quite useful differences in the autoimmune processes. The offspring of NZb and NZw (white) mice, abbreviated NZb/w, for example, develop a syndrome similar to that of lupus nephritis, culminating in florid renal failure.[14] The life histories and immunopathology of these experimental animals has been well described[15] and extensively investigated.[16]

Regulatory Dysfunction in Autoimmune Disease

One of the more attractive theories to explain the pathogenesis of autoimmune phenomena is the lack, or loss, of the suppressor function of T cells, noted above as one theory explaining self-tolerance. Obviously, if during fetal life an organism developed tolerance for its own antigens by the production of populations of cells which specifically depressed immune responses to these antigens, the loss of such populations in later life, possibly as a result of viral infection, would allow the immune system to respond to self-antigens. To better evaluate this theory of the pathophysiology of autoimmune disease, a discussion of some experimental suppressor cell phenomena is required.

3. Some experimental models of autoimmune disease.

Model	Analogous Human Disease
Nephritis in NZb/w mice	Systemic lupus erythematosus
Experimental allergic encephalomyelitis	Acute disseminated encephalomyelitis; multiple sclerosis
Thyroiditis in inbred chickens	Hashimoto's thyroiditis
Hemolytic anemia in NZb mice	Idiopathic acquired hemolytic anemia
Allergic sialoadenitis	Sjögren's disease

Many systems have been described in which suppressor activity is prominent in the regulatory scheme. Suppression is present either for antibody production or cell-mediated immunity or both. In most systems, the effector cell type has been demonstrated to be T cell. For example, the plant protein concanavalin A (Con A), which causes nonspecific T cell proliferation, was shown to produce suppressor cell populations in vivo and in vitro which could suppress both antibody synthesis and cell-mediated immune responses in vitro.[17,18] Further investigation into the effects of Con A showed that a potent soluble factor, named soluble immune response suppressor (SIRS), was produced which could suppress antibody production.[19] However, this apparently was not the only suppressive expression of Con A-activated suppressor T cells, since SIRS was found to have no effect on cell-mediated immunity despite the ability of those stimulated cells, some of which must produce SIRS, to suppress such reactions.[20] Another potentially more useful system, involving alloantigen activation, was developed in our laboratory.[21] In this case inbred mice are immunized with lymphoid cells from a different strain,

antigenically incompatible, by footpad injection. The animals are sacrificed after several days and splenocytes are co-cultured with splenocytes from animals of the same strain used for the prior immunization. These latter cells are treated with an antibiotic, mitomycin C, which prevents them from proliferating against the immunized cells. Both the cells and the medium in which they are cultured for 24 hours will suppress lymphoid cell proliferation of the first mouse strain to an allogeneic stimulus. The existence of this genetically specific (for it will not suppress proliferation of cells with a different genetic background) lymphokine is of potential conceptual use in attempting to explain self-tolerance. One can postulate that during the fetal period, as immune competence begins to appear, the ubiquitous presence of self-antigens could induce a population of suppressor T cells which would later prevent the immune system from responding specifically to these antigens by secretion of such lymphokines. In the fetal and neonatal periods it is relatively easy to induce specific antigenic tolerance,[22] and, of course, under normal conditions the only antigens present are those of the self. In autoimmune disease, such specific suppressor cells may cease to function by an unknown mechanism and thus allow a response to antigens previously tolerated.

There is published evidence supporting the concept of loss of suppressor T cell function in NZb mice and hybrid strains for both humoral[23,24] and cell-mediated immunity.[25] In the latter system, the existence and subsequent disappearance with age of a suppressor T cell population are clearly shown by employing graft versus host disease induction. Lymphoid cell suspensions (from thymus or spleen) were prepared from NZb/w mice of various ages. These cells were injected intraperitoneally into newborn mice of the genetically distinct C3H/HeJ strain. Ordinarily, this procedure will induce splenomegaly in the newborn recipient animal. After nine days, the ratio of the spleen weight to body weight was determined in the recipient C3H/HeJ mice. These investigators found a significant increase in the graft versus host reaction in 6-months-old NZb/w mice as compared to those in 1-month-old mice. This increase was not observed in a control strain of mice. When 10^6 viable cells from the 1-month-old mice were added to 5×10^6 cells of mice 6 months old, a significant decrease in activity was demonstrated, thus indicating that a significant suppressor function, present in the spleens of 1-month-old mice, was not present in the older animals.

A subsequent publication from the same laboratory[26] further defined this phenomenon. First, it was shown that significant increases in graft versus host reactivity appeared by 2 months of age, and increased somewhat more by 4½ months, with subsequent decline of reactivity to low levels by 12 months. Cells from the mice 12 months old were compared with those from 1-month-old animals for suppressor activity. It was discovered that cells from the older animals could not suppress the graft versus host reaction induced by 4-month-old mice, whereas those from the younger ones were quite effective. This observation ruled out the possibility that mere nonreactivity of a cell population could suppress the effects of a reactive one, conclusively supporting the existence of an active population of suppressor cells in young NZb/w mice which declined, at least functionally, with increasing age.

Implications for Human Autoimmune Disease

If the theory of suppressor T cell decline to explain some autoimmune phenomena is sustained by current and future research, there are both pathophysiologic

and therapeutic implications which can be drawn from the experimental models to human disease. The onset of autoimmune phenomena in NZb mice can be delayed significantly by injection of thymocytes from young animals.[24] Although this approach is obviously unlikely in human autoimmune disease because of transplantation difficulties not present in inbred mouse strains, one possible means of effecting the same result would be isolation of a factor or factors, perhaps similar to the suppressor factor discovered in our laboratory, which might replace the need for suppressor cells. Such therapy, it is hoped, would be more specific and have fewer adverse side effects than the currently accepted regimen of steroids and cytotoxic agents to produce immunosuppression. Actually, the most important mechanism of the current therapeutic agents may be their anti-inflammatory rather than their immunosuppressive effects, so that they may be more useful for treating symptoms than for treating the disease process. Indeed, such drugs may cause great difficulties with the pathophysiological process of inadequate immunoregulatory functions, but may mask this effect with their apparently beneficial anti-inflammatory effects. Future research should clarify these issues and improve our understanding and therapy of these important diseases.

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Mr. Orson, Baylor College of Medicine, 1200 Moursund, Houston, TX 77030.

Latency in herpesvirus hominis: its relationship to oncogenesis and recurrent disease

William S. Epstein, BA, MS

In the shallow lakes of Central Africa, nature has devised a bizarre ritual for survival. When these lakes are transformed into parched craters, only one fish survives. The lungfish coats itself with mud and exudes a leathery cocoon, persisting in suspended animation through years of drought. It can return to normalcy when it receives the proper stimulus: rain.[20]

Parallel evolutionary forces have endowed the herpesvirus with an equally effective means of persisting in a hostile immune environment after primary lesions heal. Herpesviruses establish latent infection in a diverse assortment of organisms, ranging from oysters[14] to man. Persistent herpetic infection in humans is associated with Epstein-Barr virus,[52] cytomegalovirus,[35] varicellazoster virus,[50] and herpesvirus hominis. The significance of latency in herpesvirus hominis is twofold: (1) It is responsible for recurrent eruptions, and (2) there might be an intimate connection between latency and oncogenesis. In this review of the herpesvirus hominis, two poorly understood facets of latency will be addressed—the relationship between primary lesions and recurrent disease, and the state of the viral genome in latency.

The lesions produced by herpesvirus hominis in primary and recurrent eruptions are similar histologically. Herpes simplex is polycytotrophic, infecting all tissue types, but most lesions occur in ectodermally derived tissue (for example, skin, nervous tissue, etcetera.[33] Intraepidermal vesicles evolve, filling with cytolytic debris and leukocytes drawn through inflammation. Infected cells exhibit characteristic changes: polykaryocytosis, and an altered nuclear morphology—inclusion bodies, and "ground-glass" (diffuse) nuclei.[36] The lesions are self-limiting, and usually virus is not found one week after lesions subside.

Herpesvirus hominis lesions are divided by the waistline into two categories, each caused by a different subtype. Primary and recurrent nongenital herpes is caused by herpesvirus hominis type 1; primary and recurrent genital herpes is caused by herpesvirus hominis type 2.[11] Typing can be based on a large number of criteria. Although antigenically related, types 1 and 2 can be distinguished by microquantal neutralization. Strains within a type are cross-neutralizing, but rates of neutralization vary between strains. The viral nucleic acids can be typed through differences in density (type 1:1.726 gm/cc, type 2:1.728 gm/cc), thermal denaturation profiles, and hybridization (47% homology between types 1 and 2).[39] There are differences in the infection cycle which can be discerned: type 2 produces filamentous structures in the nucleus and cytoplasm while type 1 does not; type 2 is more neurovirulent in experimental animals and forms larger and deeper pocks on chick chorioallantoic membrane. Type 2 is not as efficiently enveloped, and consequently yields titers of infectious particles one or two orders of magnitude lower than type 1. Numerous other assays are available to distinguish between the herpesvirus hominis types which may be present in a lesion.

Primary infection by either herpesvirus hominis type is usually followed by recurrence of the same viral type at the site of the original lesion. Intracerebral inoculation of herpesvirus hominis type 1 in a rabbit was followed by a period of latent infection. Upon induction, the same type was recovered in the brains of ani-

mals which had succumbed to secondary encephalitis.[42] Sometimes the virus type recurs at other sites. Intratesticular inoculation of herpes simplex H4 was followed by six months of nonapparent infection. When encephalitis erupted, the same virus was reisolated from the brain.[35] But even though the viral type remains constant, there are subtle, irregular antigenic changes that are demonstrable between viral progeny isolated from the same site in separate recurrences.[2] These changes have also been observed *in vitro*. Chinese hamster cells infected with herpesvirus hominis in tissue culture maintain a persistent infection. An equilibrium between virus and host is perpetuated in which the virus becomes progressively more virulent and the cell more resistant to the virus.[50] Superficial lesions of different types occurring simultaneously yield their respective type upon each recrudescence. A human subject suffering from both recurrent facial lesions and recurrent genital lesions was examined and virus was analyzed for type specificity. Type 2 virus was found in the genital lesions, and type 1 was found in the facial lesions. A second human patient displayed the same separation of viral subtype.[51]

Even though the pathology of lesions produced in primary and secondary infection is quite similar, there are substantial differences in epidemiology, minor differences in tissue invaded, and subtle differences in the form and distribution of lesions. Primary herpes simplex type 1 is spread through infectious mucosal secretions by kissing, sneezing, coughing, etcetera. Incidence of primary herpesvirus hominis type 1 is highest below the age of 6. Primary herpes is rare after that age, but recurrent lesions are more common. These recurrent lesions are not propagated by infectious material as in primary infection; recurrence is precipitated by various chemical and physical stimuli. Herpesvirus hominis type 2 also has epidemiological differences of the same nature. Lesions in recurrent herpesvirus hominis are smaller and more closely grouped.[5] They involve deeper tissues, sometimes causing more severe disease. Polykaryocytosis and intranuclear inclusions are more frequent in recurrence.[36] Recurrence does not always occur at the exact site of initial infection, but usually is within the same dermatome.

Primary herpesvirus hominis type 1 causes a wider spectrum of infection than recurrent herpesvirus hominis type 1. Primary lesions caused by type 1 include: (1) apthous stomatitis (gingivostomatitis), an ulceration of buccal mucous membranes, tongue and gums, (2) acute keratoconjunctivitis, an ulceration of corneal epithelium, (3) eczema herpeticum, a severe form of herpes compounding atopic eczematosis, and (4) meningoencephalitis.

Recrudescence of herpesvirus hominis type 1 assumes several forms. Herpes labialis (herpes febrilis, herpes facialis) is the secondary form of apthous stomatitis. In contrast to the primary eruption, the lesions of herpes labialis effloresce at mucocutaneous borders surrounding the nostrils, mouth, and eyes, not on mucosal surfaces.[50] Recurrence of corneal infection is usually more severe. Deeper mesodermal stroma is consumed, and the follicular keratitis common in primary infection is rare. Secondary herpetic infection of the eye is a cause of blindness, both through opacification of the cornea and through descemetocele formation with ameboid ulceration.[22] Recurrence of

herpetic encephalitis occurs in animals and man.[29] Psychosis, confusion, hallucination, and herpes facialis may accompany a relapse.[24]

Herpesvirus hominis type 2 infections are almost always genital, and since these primary lesions are caused by transmission of infectious mucosal secretions (smegma from female genitals and smegma that accumulates on the preputium of uncircumcised males), herpesvirus hominis type 2 can be considered a venereal disease. The incidence of herpesvirus hominis type 2 infection is much higher in the sexually promiscuous,[36] and virtually nonexistent in populations of the sexually innocent.[33] An extremely severe form of herpesvirus hominis type 2 is neonatal herpes, contracted by the newborn in passage through a contaminated birth canal. Although sometimes localized as an ocular infection, the disease often is disseminated to the liver, spleen, and central nervous system, with fatal result.

Recurrence of herpesvirus hominis type 2 correlates best with hormonal provocation. Women are extremely susceptible to recurrent disease during menstrual periods and pregnancy.[2] It is difficult to judge with certainty whether all cases of herpesvirus hominis type 2 are primary or secondary. Many primary infections go unnoticed even by gynecologists, and therefore many lesions ascribed to primary infection may be cases of recrudescence. Recurrent infection with herpesvirus hominis type 2 is more common in females. In certain women, lesions recur with each menstrual cycle.

There are several possible explanations for recurrent eruptions: exogenous infection, autoinoculation from chronic low-grade infection, or reactivation of a dormant virus.

Exogenous infection has been induced in mice that had previously recovered from an infection of the same herpesvirus hominis type in the same site. In humans, inoculation at a heterologous site with the same viral type has produced lesions. These inoculations were deliberate, in an attempt to enhance the body's immune response. But these secondary lesions did not cause a diminution of recurrent disease; sites of secondary inoculation erupted along with the original recurrent lesions in subsequent attacks.[28] A well documented example of recurrence through exogenous infection is the herpetic whitlow. Technically, recurrent infection encompasses any herpesvirus hominis lesion that erupts in a victim who has specific neutralizing antibody for the particular virus type. The herpetic whitlow is a "recurrent" lesion in the first eruption as well as in subsequent lesions. The whitlow is notorious for recurrence, usually in chronically traumatized tissue. The condition is an occupational hazard for the medical profession, because of frequent contact with infectious material, especially in patients who have undergone a tracheotomy. Lesions are usually on the digits or palms of the hands, and may be caused by either herpesvirus hominis type.[50] The role of exogenous infection in other forms of recurrence is probably minimal. In induced corneal keratitis there is a higher level of neutralizing antibody in the unilaterally inoculated eye, yet recurrence is more common in the eye of original infection.[9] If the inoculation were from an exogenous source, a higher frequency of infection would be predicted in the eye which did not receive the initial inoculum and had less antibody. In other

types of recurrent herpetic disease, epidemiological discrepancies make the significance of heteroinoculation questionable. The high incidence of recurrent herpes in pregnancy, when sexual activity is less likely to be extensive, is not compatible with alleged exogenous infection. It could be argued that these incompatibilities do not exclude exogenous infection, for example, "Changes accompanying hormonal flux make cells more susceptible to exogenous infection." This possibility could be investigated in several experimental probes: (1) Inoculate the eye of a rabbit with herpesvirus hominis. When primary lesions have regressed, and virus cannot be recovered in tears, place the animal in a gnotobiotic environment. Recurrent lesions would never occur if exogenous infection were required. (2) Inoculate the eye of a rabbit with a mutant[49] herpesvirus hominis (for example, plaque morphology mutant). After recovery from original lesions, the rabbit should not show any demonstrable virus. When a secondary lesion appears, isolate virus and test for appropriate genetic markers. If the cause of the lesions were exogenous, the virus isolate should not demonstrate the genetic markers of the mutant. Isolation of virions that exhibit mutant characteristics would refute the importance of exogenous infection in generating secondary lesions. (3) A system analogous to *Pneumococcus*-mouse induced infectivity, in which the animal cannot contract the disease unless willfully inoculated by a route inaccessible to the disease-causing agent—intravenous, intraperitoneal injection—could be devised. Recurrence of the disease in these conditions would mean that exogenous infection is not required.

Another model suggests that recurrence reflects autoinoculation from productive lesions on other parts of the body. On rare occasions, herpesvirus hominis type 2 is isolated from two sites of an individual—a nongenital and a genital site. Usually, these cases involve infants who probably transferred infectious material from one site to another.[30] This is probably not a major route of infection because most lesions are not preceded immediately by other lesions. Most individuals harbor no detectable virus between eruptions.

Chronic low-grade infection may be a casual route in some recurrences. Virus "shedding," the chronic release of infectious particles in the absence of apparent lesions, has been observed in both experimental animals and man. After bilateral inoculation of rabbit corneas, lesions appeared and lasted about two weeks. When lesions had healed, the rabbits' eyes were tested for virus by titering on susceptible cells in culture. Virus was isolated from both lacrimal and Hardner's glands in one-half of the animals before lesions were evident in the light microscope.[9] It was concluded that chronic periocular infection was intermittently bathing the corneal epithelium, and this form of autoinoculation might be a source of recurrent infection. Other, more prolonged studies in rabbits found intermittent shedding for three years after initial infection.[3] Similar findings have been reported in humans. The frequency of virus shedding is inversely related to age. The highest incidence occurs in infants, about 30%. Estimates of the frequency of virus shedding in adults range from 3% to 30%.[23,35] Chronic infection has also been implicated in genital herpes, where herpesvirus hominis is known to persist for long periods of time.[33]

The three preceding avenues of infection do not explain the absence of virions in most individuals between eruptions. They may account for a percentage of recurrences, but they do not discount the possibility that latent infection is extensively involved in recurrent disease. Theories of latent herpes residence must explain continual recurrence in one site, even though provocation is systemic.

Activation of latent herpetic infection by steroids suggests persistence in epithelial cells, because they are target cells for these hormones. Several attempts have been made to recover virus from epithelial cells at sites of recurrence, in the interim between active eruptions. When skin scrapings from these sites were directly inoculated onto susceptible cells, no virus was found. Explanation of oral mucosa and skin in tissue culture for five months did not reveal virus either.[41] Attempts to graft sites of recurrent lesions in dormant cycles to other parts of the body were equally unsuccessful. Not only did translocated tissue fail to erupt, but donor sites continued to produce recurrent lesions.[24] (There have been reports that removal of epithelial tissue in the recurring site causes termination of recurrent disease. Sometimes recurrence is altered—the lesions erupt in tissue adjacent to the original lesion.)[22]

These failures to demonstrate herpesvirus hominis in epithelial tissue do not preclude the possibility that latency is occurring in epithelial cells. The transplantation procedure might destroy latent virus particles or interfere with reactivation. Scrapings could similarly disturb either the virus or the environment needed for reactivation.

There is rigorous evidence for latent herpesvirus hominis residence in one very abnormal epithelial cell type: Exfoliated cells from cervical carcinomas display herpesvirus hominis type 2 specific cell antigens, detected by immunofluorescence.[56] (Other cells from the vagina of the patient did not have these virus-induced antigens.) A more irrefutable proof that a herpesvirus hominis genome was maintained in latency was obtained through hybridization experiments, in which viral specific RNA was hybridized to the DNA of a line of cervical carcinoma cells. A large fragment (39%) of the herpesvirus hominis type 2 genome was found.[57] A difference line, upon degeneration, provided the ultimate evidence—production of herpesvirus hominis type 2 virus.[4] There have also been reports of herpesvirus hominis induced antigens on cells derived from carcinoma of the lip.[27]

This series of discoveries has bred speculation that the persistence of herpesvirus hominis within cells may be emeshed in the etiology of human cancer. Epidemiological evidence corroborates this charge. Higher incidence of both genital herpes and cervical carcinoma correlates with early coital experience, promiscuity, and sexual contact with uncircumcised males.[30] There is an unusually high frequency of herpesvirus hominis type 2 antibody in women suffering from aberrant cervical growth when compared to control populations: Invasive cancer, 83% versus control 35%; in situ cancer, 70% versus control 24%; cervical dysplasia, 56% versus control 18%; cervical atypia, 40% versus control 20%.[30,36] Age distribution for herpesvirus hominis type 2 incidence precedes that for all of these anomalous cervical growths. These figures can only suggest "guilt by association." The causative role of herpesvirus hominis in induction of cancer can only be

definitively established by types of evidence which specifically associate herpesvirus hominis with the cancer. Required evidence includes demonstration of disease following inoculation, prevention of cancer by specific immunization, detection of herpes simplex virus in cancer cells, etc. To date, experimental animal models have been of limited value either in confirming or disproving this role. Inoculation of newborn mice has produced cases of cervical carcinoma in situ. Tumors were also induced in hamsters, although not in the site of inoculation. Attempts to cause cervical cancer in nonhuman primates by inoculation with herpes virus hominis 2 have been moderately successful. Studies of oncogenic induction *in vitro* cannot be done with normal virions in hamster embryo fibroblasts; the virus will decimate the cell culture. Irradiation with ultraviolet light will inactivate infectious potential without destroying transforming potential. Experiments using these inactivated virions have reported that herpesvirus hominis type 2 does transform cells in culture.[12]

The predominant form of latent herpesvirus hominis is found in association with nervous tissue. Classical experiments during the acute phase of the infection established the routes of viral migration from the original lesion to the central nervous system, through sensory, motor, and sympathetic fibers as well as via the bloodstream in some cases.[32] After inoculation of herpesvirus hominis into the right cornea, virus infection passed through the sensory fibers of the right fifth cranial nerve and attacked the pons and medulla unilaterally. Inoculation of herpes simplex into the right masseter muscle was followed by transmission of virus through the motor nerves to the same regions of the brain. Transmission of herpesvirus hominis through sympathetic nerves was demonstrated by inoculation of the ovary, causing paralysis of the caudal half of the body.

The neural cell type in which the virion replicates is not well established. In an analysis of herpetic encephalitis in mice, it appeared that viral replication occurred in the perineural fibroblasts and Schwann cells. Using immunofluorescence, the investigators performed a "time course" study on the route of the viral migration. As the pathway of virus infection moved centripetally, virus specific antigens were located only on perineural cells. There was no immunofluorescent evidence for viral multiplication in axons.[21] When similar "time course" studies were done using both immunofluorescent and electron microscopic technique, a different picture emerged. By immunofluorescence, viral antigens were demonstrated in both axons and surrounding cells, but it was clear from electron micrographs that mature virus particles were found only in axons and not in perineural cells. Nucleocapsids were seen in the perineural cells, perhaps products of abortive infection. The infection of perineural cells is probably secondary from infected axons. This conclusion can be drawn from two pieces of evidence. First, the rate of virus passage is much more rapid than could be explained by sequential infection of contiguous supporting cells. Secondly, the passage of virus is relatively unaffected by injection of neutralizing antibody. Replication within the axon would offer the virus speed within the axonal conduit, and compartmentalization, protecting it against immune defense. (Even though the transmission of virus is intra-axonal, the abortive

infection of perineural cells may be relevant to the question of latency.)

Presence of infectious herpesvirus hominis in nervous tissue is only transient, however. One week after inoculation into the mouse foot pad, there is no evidence of herpesvirus hominis particles or products as determined by use of immunofluorescence and electron microscopic ultrastructural analysis. It is not impossible that intact particles exist, but in such a low frequency that they are undetectable. The inability to observe plaque forming units upon homogenization and plating on susceptible cells does not mean that structurally intact, yet inert, virus are not present. The virus particles might be coated with some inactivating substance.

When the tissues of the nervous system are explanted in organ culture, the spinal ganglia begin to yield infectious virus after one week, continuing to do so for four months. None of the other tissue cultured (sciatic nerve trunks, thoracic spinal cord, and medulla oblongata) produced virus particles.[45] Inoculation of rabbit cornea initiated the same chain of events. After the primary lesions healed, animals were sacrificed and nervous tissue was removed. Homogenization of the tissue yielded no plaque forming units on susceptible cells at the time of removal. Portions of nervous tissue were explanted into organ culture. Spinal ganglia produced herpesvirus hominis within one month. The other neural tissues (sections of the nerve peripheral to the ganglion, medulla oblongata) did not yield virus.[46] A later study revealed latent herpes infections of both the spinal ganglia and the brain stem.[25]

These animal model systems have been corroborated by independent groups studying human cadavers. In one investigation, human choroid plexuses and trigeminal ganglia were removed at autopsy from 23 unselected individuals. No virus was recoverable at the time of removal, but after three weeks of organ culture, two of the trigeminal ganglion explants began producing infectious virus particles. No plaque forming units could be found in any of the choroid plexus explants when tested on susceptible cells.[7] A second study, using 17 unselected corpses, also revealed evidence of latent infection. Trigeminal ganglia were removed at autopsy and examined for virus by titering homogenized tissue on susceptible cells. No plaque forming units were detected. Trigeminal ganglion tissue was then explanted in organ culture. Within eight weeks, eight of the explants were producing herpesvirus hominis.[55] In another study, using identical procedure, virus production was found in six of seven trigeminal ganglion explants.[6]

These demonstrations of latency only prove that the virus can be carried in a latent state. They provide no evidence that the latent infection is related to recurrent disease. A more meaningful study could be done on selected cadavers. If one compared the amount of latent herpetic infection in individuals who had suffered recurrent herpes infections to the amount of latent virus harbored in control populations, an idea of the role of latency in recurrence could be obtained.

Another method of relating latent herpetic infection to recurrent eruptions involves reactivation experiments in animal models. Use of physical or chemical agents which are known to provoke these eruptions is difficult because administration of the stimulus often kills the animal.[47] Three nonlethal systems have worked in reactivating latent herpesvirus hominis. Rabbits harboring a latent herpesvirus

hominis infection were injected intracorneally with horse serum, with which they had been previously sensitized. This elicited Arthus's reaction and, concomitantly, a recrudescence of herpetic infection.[1] A second technique of reactivation entailed the injection of epinephrine. Mice were doubly inoculated with herpesvirus hominis intramuscularly and intracerebrally. After recovery, the mice were divided into groups: control, pyromen injection, glutathione injection, cortisone injection, and epinephrine injection. Although no recurrence was found in the first four groups, encephalitis was precipitated in the epinephrine treatment group.[42] Recurrence has been precipitated by anaphylactic shock in rabbits containing latent herpesvirus hominis. Rabbits previously sensitized to egg white developed secondary herpetic infection upon a second challenge.[17]

Surgical induction of recurrent herpesvirus hominis in humans is a more definitive demonstration of the role that latent herpetic infection of nervous tissue has in secondary disease. Trigeminal neuralgia is effectively treated with tractotomy of one of the three branches of the trigeminal ganglion—the ophthalmic (sensory), maxillary (sensory), and mandibular (sensory and motor). Sensory fibers of the maxillary and mandibular branches innervate the site of usual recurrent herpes (facial). Section of the sensory root on the central side of the trigeminal ganglion elicits herpesvirus hominis only in the dermatome of the sectioned nerve.[38] The sectioning of the motor root or the sectioning of the sensorimotor branches on the peripheral side of the ganglion does not cause recurrence. Precipitation of recurrent infection does not occur if the sensory nerve is not intact—if it is nonfunctional, or if it is injected with alcohol prior to sectioning.[61] These data suggest that the latent form is activated by cellular changes that result from sectioning, and that the virus descends the peripheral nerve tracts to the epithelial tissue, where it promotes lesions. A clue to the nature of the cellular changes which signal viral multiplication may be found in cells encasing the peripheral stump of the sectioned nerve. Not only does herpesvirus hominis engage in replication, but the dormant Schwann cells also synthesize DNA and RNA, and divide.

Other stimuli which catalyze the reactivation of herpesvirus hominis are not amenable to experimentation on humans. Systemic diseases such as leukemia and malnutrition can induce recurrence, probably by damage to immune mechanisms. Febrile diseases, especially lobar or bronchopneumonia, bacterial meningitis and influenza, and artificially induced pyrexia induce recurrence so effectively that the term "fever blister" was coined.[38] The efficacy of the common cold in prompting the appearance of recurrent lesions has similarly spawned the nickname "cold sores." Physical stimuli, including ultraviolet exposure,[22] cold or strong wind, and trauma (ultraviolence) are common precipitating factors.[16] Chemical agents are effective in inducing recurrence. Proteins administered in treatments or vaccinations, or changes in endogenous production of hormones, as in menstruation or pregnancy, are effective in triggering recurrent eruptions. An unusual precipitating factor is emotional stress. Its mechanism may be the release of increased amounts of epinephrine, causing vasoconstriction and anoxia. Certain viruses that are inactiviated by oxidation can be reactivated by reducing conditions. For the re-

activation of herpesvirus hominis, this might bear relevance. This collection of inducers is so heterogeneous that it is difficult to envision any universal mechanism by which all of these stimuli effect activation. The cryptic pathways which yield recrudescence cannot be evaluated until the state of the viral genome is determined.

The virus may endure latency as an intact extracellular virion. This would seem unlikely because victims of recurrent herpes have high titers of neutralizing antibody. One hypothesis which would reconcile the persistence of virions in the presence of antibody is "sensitization," or the protection of virus by non-neutralizing antibody. There are data to substantiate this model. Herpesvirus hominis virions isolated from the eyes of rabbits were "sensitized" by IgG so that they could not be neutralized by IgA. Addition of anti-IgA caused a large increase in plaque forming units; addition of anti-IgG caused a significant decrease in plaque forming units.[9] The explanation is that IgG competes for the antigenic sites with which IgA would react in neutralization. Removal of the blocking antibody by anti-IgG exposes the site and allows neutralization. A good test of this hypothesis requires a population deficient in IgG production. If they were immune to recurrent herpesvirus hominis infections, the sensitizing IgG molecule would be implicated. *In vitro* experiments have explored the role of antibody in herpesvirus hominis latency. When cells are incubated in the presence of neutralizing antibody, cytopathic effects cease. (Virions can still be recovered in this system, an obvious difference from *in vivo* latency, where the virions seem to disappear.) Removal of antibody from the medium causes renewed growth of the virus.[54]

The virus might survive the interludes between lesions in some sort of subsistence infection. In the infection cycle, herpesvirus hominis presents antigenic determinants on both the virion[60] and on the surface of the infected cell.[37] Assuming that the humoral effector arm of the immune response can neutralize any virions released to cytolysis, one must look for two explanations: (1) How does the infected cell survive immune destruction? and (2) How can the virus get from cell to cell? The survival of infected cells has been blamed on a specific malfunction in the cellular immune response.[53] When lymphocytes from herpes patients were tested for macrophage migration inhibition factor production and lymphocyte toxicity and compared to an uninfected control group, clear differences were seen. Both groups performed equally in response to challenge with *Candida albicans* antigens, but the group with prior history of herpesvirus hominis infection was deficient in response to herpesvirus hominis antigens. Further support for the impact of this defect is the observation that herpetic lesions are more severe in patients with defective cellular immune mechanisms.[36] The impairment of cellular immune response might allow foci of infected cells to persist, but it does not explain the ability of the herpes simplex virions to get from one cell to another. The infection by herpesvirus hominis is cytolytic, and to avoid contact with antibody, infection can be propagated by polykaryocytosis. Infected cells fuse with uninfected cells before undergoing lysis, allowing transfer of virus without exposure to the extracellular milieu. The sequence of events may occur as follows: Virus infection elicits the release of lysosomal enzymes which reduce the thickness of the glycoprotein coat, and induce the activation of cell membrane as-

sociated ATPases. Cleavage of ATP in the membrane releases pyrophosphate, which binds calcium, destabilizing the membrane into a micellar structure. Membrane macromolecules are given greater freedom and interact with similar macromolecules in other cells, initiating fusion which is driven to completion by surface tension effects.[34] Virus coded antigens are probably crucial to the intercellular interactions. Cell fusion occurs more frequently in recurrence, suggesting its relevance to virus persistence.

The virus may enter the latent state as a subviral particle. No mature virions are detectable in most organisms harboring latent infection. Most *in vitro* attempts to simulate latency, by lowering temperature or incubating the cell culture in the presence of neutralizing antibody, do not satisfy this *in vivo* observation. Usually intact viruses can be found. One experimental method of inducing latency does not retain intact virions, and is consistent with the idea of a subviral particle in the interim between phases of growth. Incubation of herpesvirus hominis type 2 in the presence of cytosine arabinoside prevents replication of the virus. It does not seem to be a result of cytotoxicity because the eclipse period for superinfection is normal, while the induced latent virus is delayed for five or six days before virions reappear.[31]

It would be possible to determine at what step in the infection cycle the block occurs, by using temperature-sensitive mutants, many of which are already available.[49] It would be necessary to obtain mutants distributed throughout the infection cycle, and establish the sequence of their functions. Incubation of cells harboring latent temperature-sensitive herpesvirus hominis at nonpermissive temperature will interfere only with mutants that have genetic lesions in functions necessary for the maintenance of the latent state. Starting with the latest function, each mutant can be tested in sequence, progressing toward the early functions. Lesions subsequent to the last step in the cycle of the subviral particle will not affect the perpetuation of the latent state. Any lesion in the viral genome which corresponds to a function preceding the endpoint of the subviral cycle will disrupt, and perhaps abort, the latent infection.

It is tantalizing to propose some analogue of bacterial lysogeny as a means of latent infection. There is a sound precedent for persistence of the genome as a nucleic acid molecule. Hybridization experiments have revealed the presence of herpesvirus genomes associated with cellular DNA.[13] These herpesviruses include Epstein-Barr virus, Lucke, herpesvirus saimiri, and the previously cited example of herpesvirus hominis type 2.

Attempts to recover viral specific sequences in the nervous tissue that harbors latent infection have been unsuccessful. The sensitivity of these experiments would have detected the presence of 20 or more viral genome equivalents per cell. Most sensitive experiments will resolve this possibility.[47]

The role of latent infection in recurrent herpetic disease is probably more important than other routes of reinoculation. Reisolation of the same herpesvirus hominis strain in recurrence and epidemiological differences between the two possible sources of infection support this contention. Intensive analysis of latently infected cells, especially with hybridization techniques, will help to unravel the mystery of herpesvirus hominis latency. These results will define the connection between

herpesvirus hominis and oncogenesis, and confirm its part in the recurrence of herpetic eruptions.

Summary

In this article, several aspects of herpesvirus hominis infections are examined. Primary and recurrent lesions are described and possible relationships are explored. Experiments which attempt to define the state of viral genome in latency are reviewed and alternative avenues of investigation are proposed. Stimuli for reactivation are discussed. The role of herpesvirus hominis in the etiology of cancer is considered.

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Mr. Epstein, 1116 Winnie, Galveston, TX 77550.

A reference list will be furnished on request to *Texas Medicine*, 1801 North Lamar Blvd, Austin, TX 78701.

MEDICINE AND THE LAW

INFORMED CONSENT AND INFLUENZA IMMUNIZATION

With the proposed upcoming mass immunization in 1976 for the new strain of influenza virus, sometimes called swine influenza virus, the question of what must be obtained in the area of informed consent has been asked.

A doctor under normal circumstances cannot properly undertake or should not properly undertake treatment or vaccination without the consent of his patient. A general or blanket consent, moreover, may have no legal force if the patient was not afforded an opportunity to compare the risk of the vaccine with the dangers of foregoing it. Subsequent to such advice, the patient's decision to go ahead with the immunization despite the risk disclosed to him, is said to be the product of his "informed consent."

It is clear enough that the informed consent concept separates into two elements: information and consent. A twofold duty is imposed: (1) the physician must disclose certain information about risk collateral to the proposed vaccine, and (2) he must not proceed without consent to the risks that have been, or should have been disclosed.

The information element of informed consent concerns the scope of the physician's duty to disclose risks collateral to the immunization. As to what information should be disclosed, the law does not require the disclosure of every remote risk. The law is generally that the physician should disclose "what a reasonable practitioner would make under the circumstances" or "what is consistent with good medical practice."

While an oral consent is legally adequate, oral statements are often difficult to prove. By reason of this, a written form which is witnessed by another person, preferably an employee of the physician, is felt advisable for the vaccine in question.

In hopes of satisfying the questions raised in regard to informed consent in relation to the immunization program, the Center for Disease Control (Department of Health, Education and Welfare, Public Health Service) has developed forms that explain the monovalent and bivalent vaccines, side effects, and precautions which should satisfy the informational element of informed consent. This form coupled with the properly witnessed signature of an authorized person who can verify the fact of such consent should satisfy the "informed consent" question for immunization of the A/New Jersey/8/76 (Hsw 1N1).

The following form was designed for use with the monovalent vaccine. It will be printed on white paper, while a similar form for the bivalent vaccine will be printed on blue paper. Both forms will be available in quantity at vaccine distribution centers. On the reverse side of both forms, the information appears in Spanish.

IMPORTANT INFORMATION ABOUT SWINE INFLUENZA (FLU) VACCINE (MONOVALENT)

The Disease

Influenza (flu) is caused by viruses. When people get flu they may have fever, chills, headache, dry cough or muscle aches. Illness may last several days or a week or more, and complete recovery is usual. However, complications may lead to pneumonia or death in some people. For the elderly and people with diabetes or heart, lung, or kidney diseases, flu may be especially serious.

It is unlikely that you have adequate natural protection against swine flu, since it has not caused widespread human outbreaks in 45 years.

The Vaccine

The vaccine will not give you flu because it is made from killed viruses. Today's flu vaccines cause fewer side effects than those used in the past. In contrast with some other vaccines, flu vaccine can be taken safely during pregnancy.

One shot will protect most people from

swine flu during the next flu season; however, either a second shot or a different dosage may be required for persons under age 25. If you are under 25 and a notice regarding such information is not attached, this information will be provided to you wherever you receive the vaccine.

Possible Vaccine Side Effects

Most people will have no side effects from the vaccine. However, tenderness at the site of the shot may occur and last for several days. Some people will also have fever, chills, headache, or muscle aches within the first 48 hours.

Special Precautions

As with any vaccine or drug, the possibility of severe or potentially fatal reactions exists. However, flu vaccine has rarely been associated with severe or fatal reactions. In some instances people receiving vaccine have had allergic reactions. You should note very carefully the following precautions:

- **Children under a certain age should not routinely receive flu vaccine. Please ask about age limitations if this information is not attached.**
- **People with known allergy to eggs should receive the vaccine only under special medical supervision.**
- **People with fever should delay getting vaccinated until the fever is gone.**
- **People who have received another type of vaccine in the past 14 days should consult a physician before taking the flu vaccine.**

If you have any questions about flu or flu vaccine, please ask.

REGISTRATION FORM

I have read the above statement about swine flu, the vaccine, and the special precautions. I have had an opportunity to ask questions, including questions regarding vaccination recommendations for persons under age 25, and understand the benefits and risks of flu vaccination. I request that it be given to me or to the person named below of whom I am the parent or guardian.

Name _____ **Birthdate** _____ **Age** _____

Address _____ **County of Residence** _____

Witness _____

Address _____

This form is solely an informed consent and does not represent a release and/or indemnity agreement. It is the recommendation of TMA counsel that on each executed form two lines be added for signature and address of a witness who can be in the position to later testify to the effect that the form was exhibited to and/or read to the individual patient before signature in order to keep to a minimum subsequent claims that the patient "did not understand what was being signed." It is additionally important that the proper form (monovalent or bivalent) be utilized depending upon the vaccine being administered.

BROWN, MARONEY, ROSE,
BAKER & BARBER
Jack Maroney and Ace Pickens

Questions/Answers

LEGAL COUNSEL RESPONDS TO INQUIRIES REGARDING SWINE FLU VACCINE

Q Can a physician enter into a contract with his patient whereby the patient releases him from liability for administering the swine flu vaccine?

A The general rule is that persons may not contract against the effect of their own negligence and that such agreements are invalid. Even under the view that a person may, under some circumstances, contract against liability in the performance of some duties, he cannot do so where either (1) the public interest requires the performance of such duties, or (2) the parties are not equal and the weaker party is compelled to submit to the stipulation.

The application of these principles to exculpatory contracts between physicians and patients has been considered in relatively few instances. It can, however, be said that what rulings there are indicate that, generally, such contracts are invalid.

Therefore, it is likely that a general release signed by the patient would not relieve the physician or his employees from liability for negligently administering the vaccine.

Q What is the liability of a physician for administering the swine flu vaccine in his or her office?

A The legal responsibilities in giving the swine flu vaccine are the same as in administering any other vaccine. After

the patient has given his consent (see comments re informed consent) and the vaccine has been administered in accordance with standard medical practice, liability for the vaccine itself will normally fall on the manufacturer.

Q Does a physician's insurance policy cover him and his employees *in his office* in administering swine flu vaccine?
A In general, physicians' professional liability policies agree to defend and pay damages for the physician in any claim at any time based upon professional services which were or should have been rendered by the insured or any other person for whose acts or omissions the insured is legally responsible. In view of this, a physician and his employees should be protected by his policy in administering the vaccine in his office.

Q What is the liability of a physician whose only purpose in attending a "public free swine influenza clinic" is to help in emergency medical treatment?
A In Texas there has never been a reported case construing the Good Samaritan Law (Article 1(a), RCS of Texas), which states in part that, "no person shall be liable in civil damages who administers emergency care in good faith . . ." However, if neither the physician nor the organization sponsoring the clinic is being paid for the emergency treatment, it is conceivable that the Good Samaritan Law would protect the physician and other voluntary workers at the clinic.
The physician is cautioned that if he is being paid or the sponsoring organization is being paid, or if he has supervisory responsibilities for administering services or he is there for any purpose other than emergency medical care, then he will be subject to suit if negligent conduct is proved against him.

Q What is the physician's liability for participating in *public clinics* where he becomes responsible for supervising administering swine flu vaccine?
A The fact that the person administering the vaccine is controlled by the physician-supervisor may enhance his liability probabilities. But the fact that a nurse or other person is under a doctor's supervision and acts under his orders as to some matters does not make him or her his agent for all purposes. When the physician controls the manner of doing the work and supervises the means, methods and details of the work, the person administering the vaccine may become a "borrowed servant" whose negligence is imputed to the doctor. The borrowed servant doctrine renders the physician liable for other persons' employees (normally from the hospital). Whether the physician can be held liable for the negligent act of the person administering the swine flu vaccine depends on the particular case and whether he or she can be said to have "borrowed" and brought the employee under his or her control.
It should be pointed out that a physician's mere instructions to another does not create a master-servant relationship, and there must be a fact-finding that the requisite control existed. Often this is predicated on the physician's presence at the time the negligent act occurred and the fact that he had an opportunity to alter the course of events. It must be shown that the physician controlled not only the end sought to be accomplished by the employment of another, but also the means and details of its accomplishment; not only what was done, but how it was done.
Possible liability should be clearly understood prior to accepting responsibility for the supervision of the administering of the swine flu vaccine.

Q Is the federal government going to indemnify physicians who participate in these programs?
A It now appears that the US Congress will not pass such a bill, and therefore, no indemnity can be expected from the federal government.

Q Is it possible that the State of Texas would indemnify physicians who participate in the program?
A The Texas Legislature will not be in session until January 1977; therefore, no relief can be expected from the State of Texas.

Q What about informed consent in the swine flu program?
A *Reyes vs Wyeth Laboratories*, 498 Fed 2d 1264 (5th Cir No 74-501, Dec 23, 1974), which was upheld by the US Supreme Court, involved administration of Sabin oral polio vaccine in Hidalgo County, Texas. In that case, Mrs. Reyes alleged she was not warned of any possible danger involved in her daughter's taking the vaccine even though she did sign a form releasing the State from all liability in connection with the immunization. The Court stated that it must assume that the mother would have acted on a warning, had it been given, and a warning might have prevented the daughter's polio; it unquestionably

would have avoided the defendant's liability. The Court said that the seller or manufacturer of the vaccine had a duty to provide proper warning in selling the product and that Wyeth knew or had reason to know that the vaccine would not be administered as a prescription drug; therefore, the company was required to warn foreseeable users, or *see that the Health Department warned them.*

It follows that it also is necessary in the administration of the swine flu vaccine to warn patients of possible dangers. Therefore, the federal government, through the Center for Disease Control (HEW Public Health Service), by contract with the drug companies, has assumed the responsibility for developing a form which explains the disease, the vaccine, side effects and precautions.

Q What about consent for married minors?

A Texas law is that a male or female under 18 years of age who marries has the disabilities of minority removed and can give consent to receive the vaccine.

Q Who should sign the informed consent?

A The person receiving the vaccine, if he or she is over the age of 18. If he or she is under 18 and unmarried, one qualified to give consent for medical treatment should sign.

Q How long should a doctor keep the informed consent records?

A The informed consent records for the swine influenza vaccine are the same as other informed consent records. The purpose for keeping the forms is to protect the physician from allegations of negligence or lack of informed consent. It is recommended that the forms be kept three years for adults and two years after the 18th birthday for those who were not adults when they received the vaccine.

Q Should the forms used in my office be witnessed?

A Yes. It is recommended that the physician use the form developed by HEW and that two lines be added, if not on the form, for the signature and address of some person in the doctor's office acting as a witness that the patient understood the form and signed same.

"I'm sorry but you are already overdrawn."

a new tablet design for

Orinase®

tolbutamide, Upjohn

0.5 Gm tablets

This new design will help pharmacists, physicians, nurses, and patients identify Orinase by name and manufacturer. The number on the tablet is for identification and is not related to tablet strength.

You may wish to advise your patients that this change is taking place.

J-5255-6

The Upjohn Company, Kalamazoo, Michigan 49001 **Upjohn**

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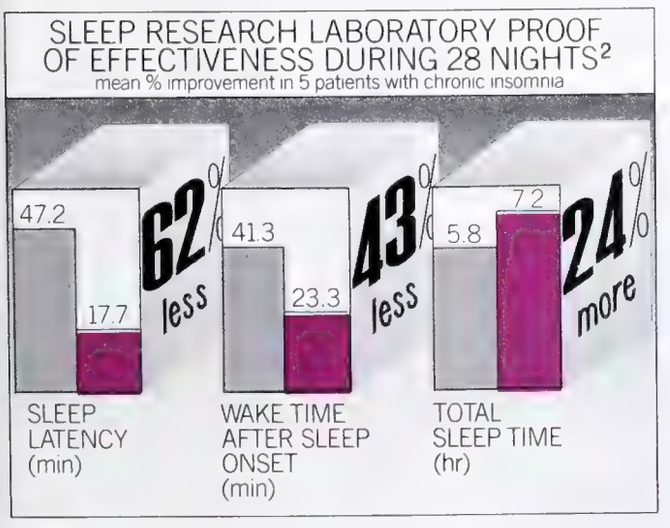
For insomnia that is a chronic problem...

Only Dalmane (flurazepam HCl) offers sleep laboratory proof of effectiveness for as long as 28 nights

Continued relief of insomnia in patients with chronic insomnia

Since insomnia is often transient and intermittent, the prolonged administration of a hypnotic is generally not necessary or recommended. But when insomnia is a chronic or recurring problem, continued effectiveness is as important as initial effectiveness. Results of a recently published sleep research laboratory study[1] demonstrated that, while pentobarbital lost effectiveness within two weeks, Dalmane maintained effectiveness for 28 consecutive nights. Similar 28-night results with Dalmane, displayed below, were obtained by a second sleep research group.[2] In previous studies,[3] both chloral hydrate and glutethimide began to lose effectiveness after several nights, while Dalmane maintained effectiveness throughout the 14 medication nights. Whether the problem is difficulty falling asleep, staying asleep or sleeping long enough, consider these results when selecting a sleep medication.



Patient benefits include relative safety, infrequent morning "hang-over"

Dalmane is well tolerated, seldom causing morning drowsiness or grogginess.[4] No increase in dosage is required for continued effectiveness from night to night.[1-3] Should Dalmane be used repeatedly, periodic blood counts and liver and kidney function tests should be performed. The usual adult dose is 30 mg *h.s.*, but 15 mg may suffice for some patients and is recommended as a starting dose for the elderly and debilitated to help preclude oversedation, dizziness or ataxia.

Continued relief of insomnia: One more good reason to specify

Dalmane® (flurazepam HCl)

One 30-mg capsule *h.s.*— usual adult dosage (15 mg may suffice in some patients).
One 15-mg capsule *h.s.*— initial dosage for elderly or debilitated patients.

whenever a hypnotic is needed

ROCHE

Please see following page for a summary of product information.

New objective proof: continued insomnia relief without increasing dosage...[1,2]

Dalmane® (flurazepam HCl) C-IV

Objectively proved in the sleep research laboratory...

during 28 consecutive nights of administration:

- ☐ **effectiveness with a single 30-mg *h.s.* dose, maintained**
- ☐ **rapid sleep induction, maintained**
- ☐ **sleep for 7 to 8 hours, on average, maintained**
- ☐ **less time awake during the night, maintained**

Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:

Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.

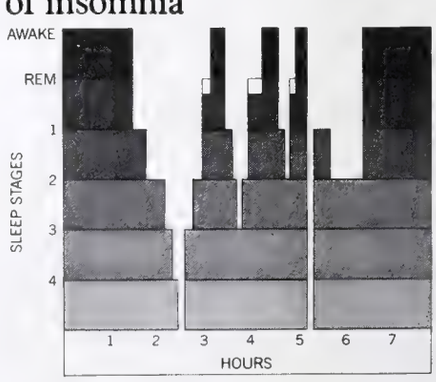
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

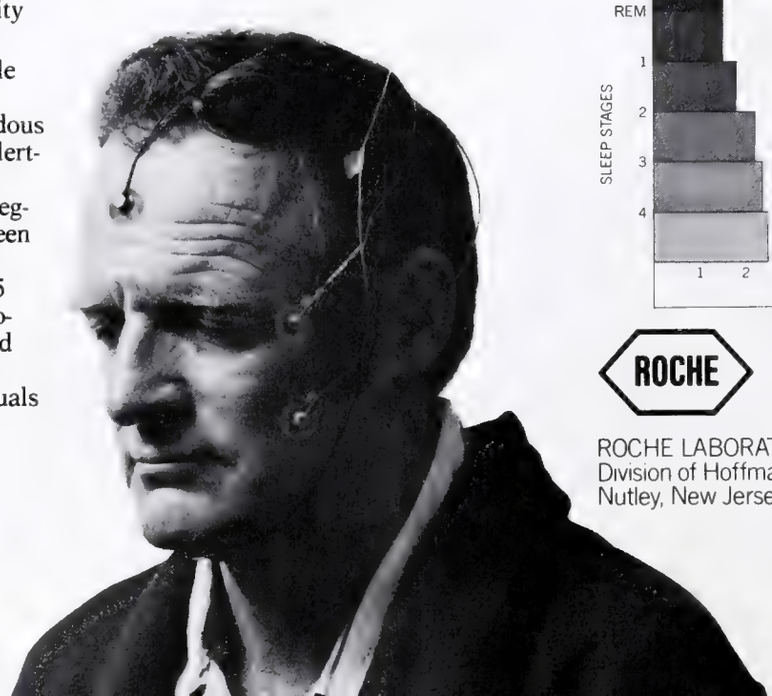
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

REFERENCES:

1. Kales A, *et al*: *Clin Pharmacol Ther* *18*:356-363, Sep 1975
2. Dement WC, *et al*: Long-term effectiveness of flurazepam 30 mg *h.s.* on chronic insomniacs. Presented at the 15th annual meeting of the Association for Psychophysiological Study of Sleep, Edinburgh, Scotland, Jun 30-Jul 4, 1975
3. Kales A, *et al*: *Arch Gen Psychiatry* *23*:226-232, Sep 1970
4. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

For all common types of insomnia





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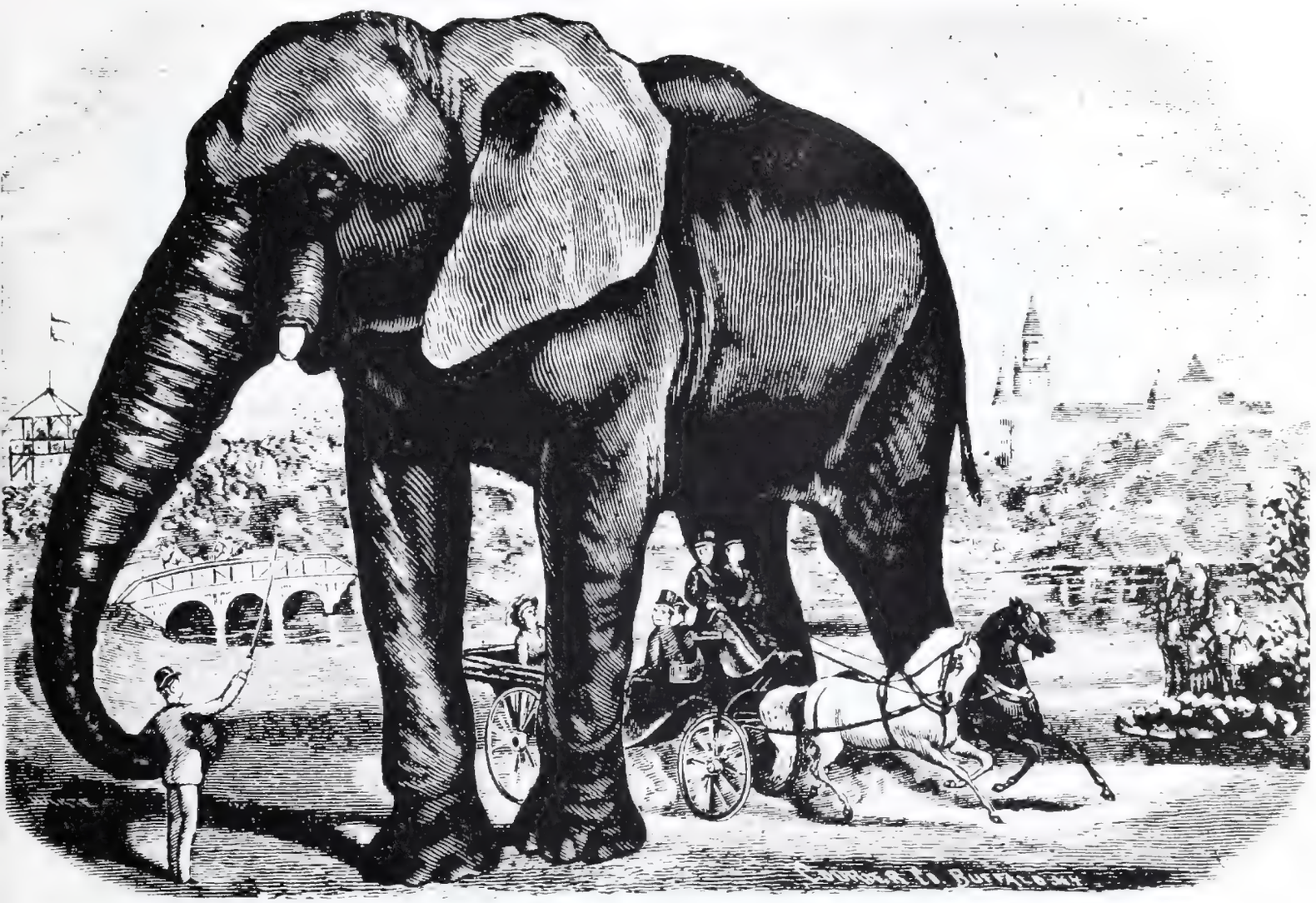
ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110



See The Motorcycle ?

You may not find a motorcycle in this picture, but you'll find plenty of them on Texas' streets and highways.

The trouble is, not enough automobile drivers are seeing motorcycles when they should. Not until it's too late, anyway.

Maybe if motorcycles were as big as elephants, you'd be more careful when you see them. But nothing is bigger than human life. And that's what we're really asking you to look out for.

CycleSafe

The Governor's Office of Traffic Safety

Find the world interesting? Photograph it

Do you notice the delicate patterns in rock formations?

Would you rise at dawn to observe the moving shadows on a sandy beach?

If the answer to these questions is "yes," then you have the potential to be a photographer, according to Dr. Owen Berg of Temple.

"Anyone who finds the world interesting and exciting can find the technical ability to be a photographer," Dr. Berg enthusiastically proselytized, although he added that one may not be an instant success.

There is no doubt Dr. Berg finds the world interesting and exciting. He is the only photographer to have received permission to record the Mountain Spirit Dance of the Mescalero Apaches, an ancient religious ceremony, during the dedication of the Indian cemetery at Fort Sill, Oklahoma. He has waited all night on many occasions for a butterfly to emerge from its cocoon. He has photographed missile firings from submarines at Cape Canaveral. But outstanding among his many experiences continues to be the opportunity to travel and to meet people all over the world.

With these experiences have come photographic honors too numerous to cite, including recent Texas Medical Association and American Medical Association awards.

Part of the story is told by the tie clasp Dr. Berg proudly wears which displays the diamond star of the Photographic Society of America. The star is awarded to a photographer who has had at least 196 pictures accepted 692 times in exhibitions. He is the only person in Texas to boast of such a distinction. He also has been honored similarly for his color slide acceptances.

An "acceptance" for exhibition indicates that the photographer's work has been judged among the best of all entries vying for a place in a particular photo show. Usually, about 20% of the entries are selected for exhibition.

In addition to his own hobby endeavors, Dr. Berg has been active in photography organizations. He currently serves as divisions vice-president of the Photographic Society of America—one of nine persons heading this group of 20,000 members. He is a founder of the Temple Camera Club and a past president of the Wichita Falls Camera Club. The Dallas, Fort Worth, and Oklahoma City clubs also claim him as a member.

Dr. Berg has so many photographic pursuits one tends to overlook that he is chief of urology at Temple's Veterans Administration Hospital and has been active in organized medicine for many years. He has such service to his credit as the past presidency of both the Texas Urological Association and the Wichita County Medical Society.

The physician said he has never considered undertaking photography as a profession because it is so much fun as a hobby. Dr. Berg remembered his own first interest in photography in 1957. A friend purchased his first camera for him in Germany. Membership in the Wichita Falls Camera Club and the Photographic Society of America seemed a good way to learn to use this new piece of equipment. Dr. Berg heartily recommends local camera clubs to beginning as well as advanced photographers.

A link to many interests

Photography has been more than just an isolated hobby for the physician. His longtime interest in entomology has provided the basis of a special devotion to macrophotography. Thus, many of his subjects are insects of various sorts. His wife is not surprised to open the refrigerator to find some sort of bug awaiting a portrait session. She was disturbed, however, the time some black widow spiders hatched during this "cooling off" period.

The entire family, which includes five children, has provided support and enthusi-

A crab spider with prey was one of Dr. Berg's more interesting subjects.

Dr. and Mrs. Berg exhibit a photo taken during a Texas Panhandle snowstorm. The couple have many memories which are stored in the physician's collection of photos.

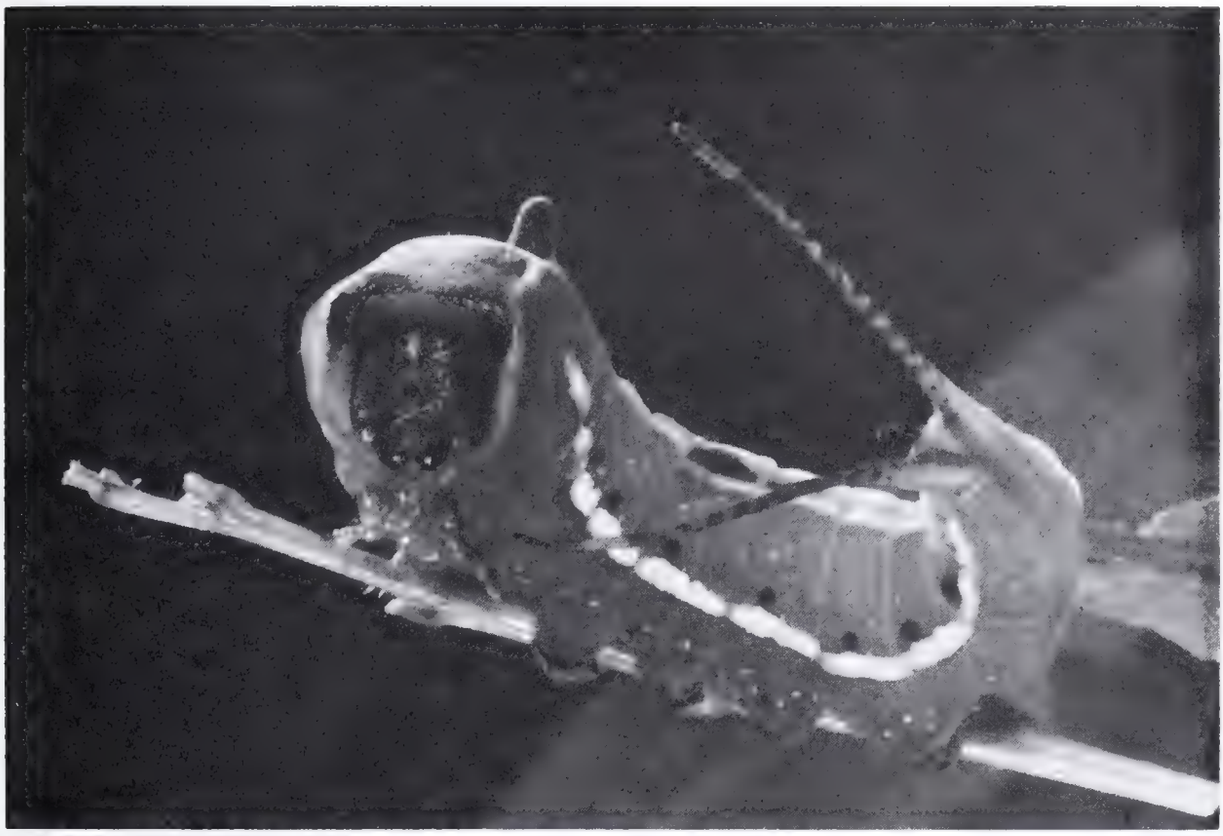
asm for Dr. Berg's hobby. When the children were growing up, they could all spot photo possibilities such as the rattlesnake brought home by one of the boys.

Dr. Berg has been generous to his home communities, donating works to hospitals and museums, establishing medical photography departments in several hospitals, critiquing beginners' works, and providing interesting civic and medical meeting programs. He has prepared slide presentations on many subjects relating to medicine and photography. One such program depicted what doctors do on their afternoons off from playing golf, sailing, baling hay, to presiding over medical meetings.

Support at home base

Although she has an eye for a good photo, Evelyn Berg will not take a photograph. She sticks to the support functions for her husband's hobby such as packing and mailing entries to shows and keeping the extensive records of acceptances and winnings. She does not mind that a darkroom is more of a determining factor in selecting a home than a spacious kitchen. In fact, following the Berg's recent move from Wichita Falls to Temple, it was she who insisted that they finally display some of Dr. Berg's works in their new home.

Mrs. Berg has been active in civic activities



A split tail prominent larva made a colorful portrait although portrayed here in black and white.

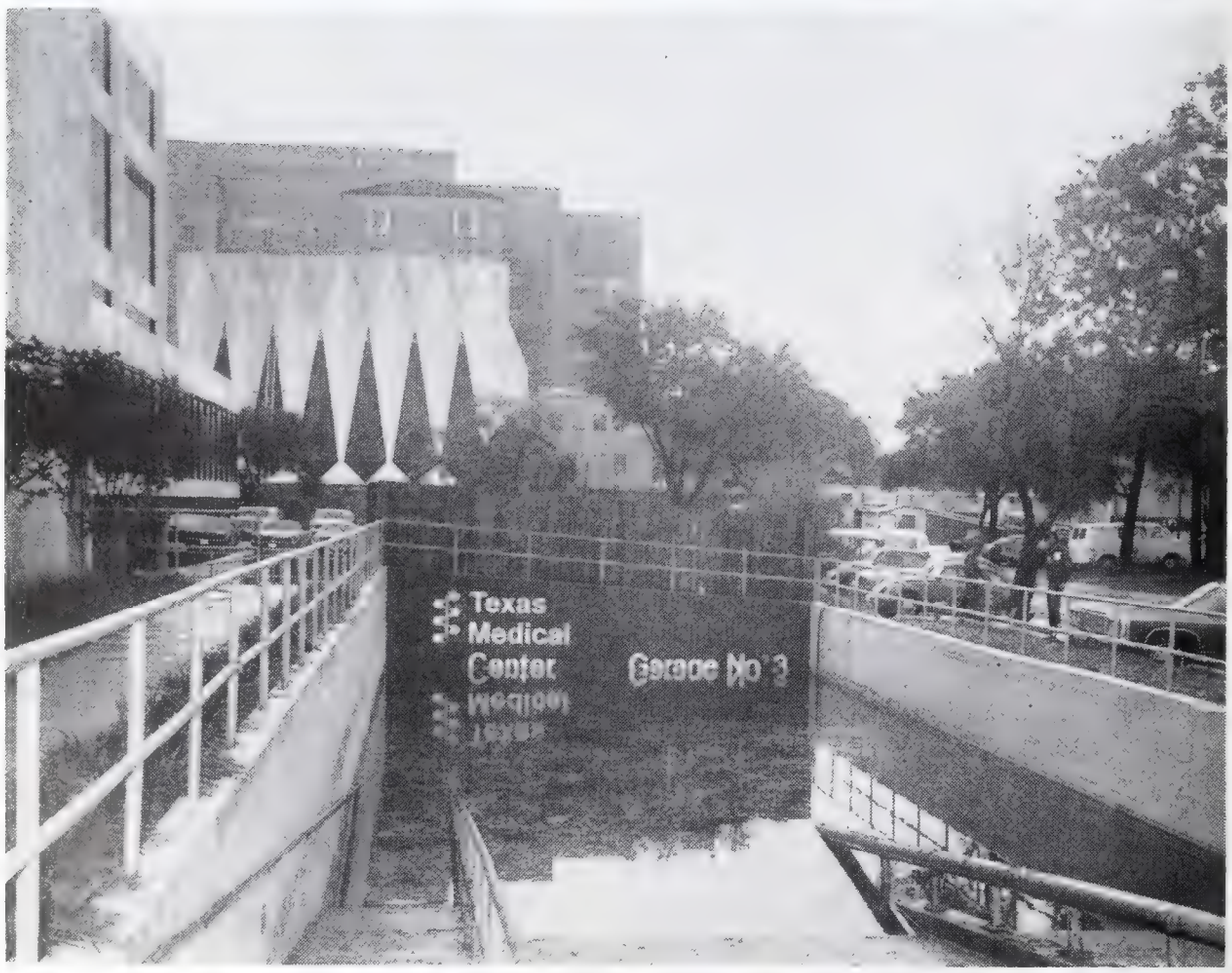
and has held several offices in both state and local medical auxiliaries. She also shares her husband's enthusiasm for travel and meeting people. One of the Bergs' most memorable experiences came in 1962 when they were invited to the Illinois estate of Myrtle Walgreen, widow of the drugstore entrepreneur. Mrs. Walgreen, now deceased, frequently entertained about ten couples for four or five days. Mrs. Berg fondly remembered the woman's "wicked sense of humor." Newcomers were taken personally by the 84-year-old heiress to sleeping quarters in a renovated barn. It was at this time that Mrs. Berg realized there would be four couples on the barn's sleeping porch, and her housecoat had been left behind! On their second visits, guests stayed in the main house.

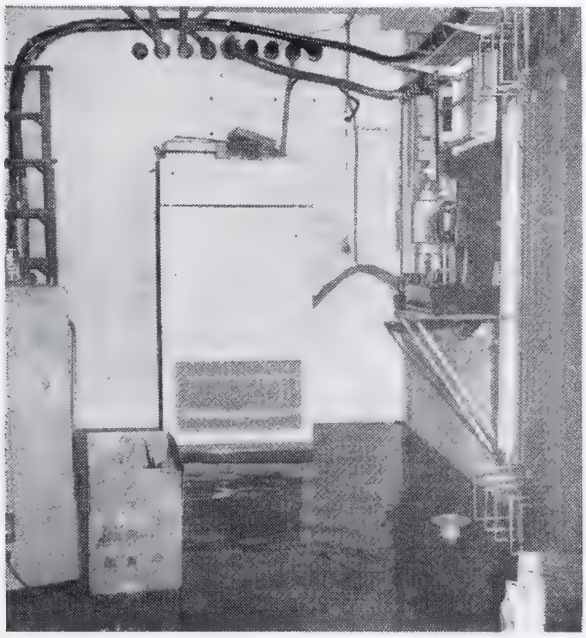
After nearly 20 years of taking pictures, Dr. Berg is not slowing down. This month alone he has judging commitments in Oklahoma City, Dallas, Port Arthur, and Minneapolis. He also plans some time for taking photos just for himself. He summed up how he feels about photography with a quote from Oscar Wilde:

> Art is the most intense mode of individualism the world has known . . . the artist can fashion a beautiful thing; but if he does not do it solely for his own pleasure, he is not an artist at all.

And the rains came . . .

. . . and came to Houston. The newspapers called it "The Great Flood" and so it was. The rising waters caused several million dollars damages to patient care and teaching institutions in the Texas Medical Center and St. Joseph Hospital downtown. The late June storm also touched the headquarters of the Harris County Medical Society located in the Jesse H. Jones library building in the medical center. Pictured below is the garage entrance to the building. The photo at right illustrates the mood of the day at the Texas Medical Center.





A human chain was formed to remove the rare book collection from the Houston Academy of Medicine-Texas Medical Center Library. Not a single book was lost, damaged, or wet. Directly above, chairs floated in the sublevel of the library building. At left, a telephone equipment room suffered from the flood waters also. (Photos courtesy of the Harris County Medical Society)

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

A.E. BOYSEN
San Antonio, 1904-1976

C.C. CLEVELAND
Hamilton, 1894-1976

E.M. CLEVELAND
Dallas, 1914-1976

C.F. GREGORY
Dallas, 1919-1976

L.W. JACOBSEN
Dallas, 1932-1976

W.R. KNIGHT III
Houston, 1913-1976

J.B. POLKA
San Antonio, 1902-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

TEXAS MEDICAL MEMORIAL LIBRARY FUND
1801 N. Lamar Blvd., Austin, Texas 78701

I enclose the amount of $_____. Given in Memory of _____

Please send remembrance card to:

Name _____

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City and State _____

Donor Information:

Name _____

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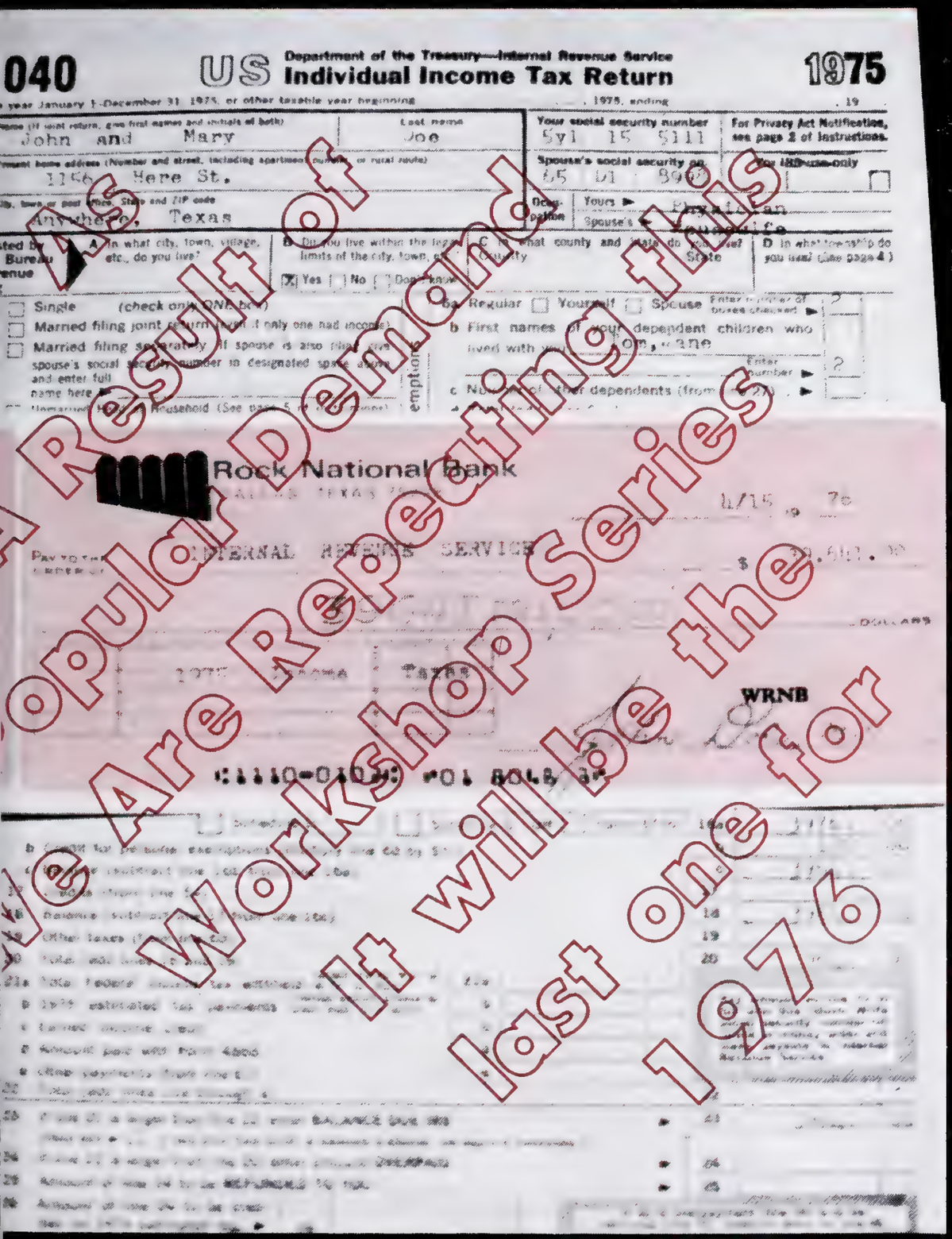
The Rape of the Physician Taxpayer



As a Result of Popular Demand We Are Repeating this Workshop Series It will be the last one for 1976

Comments:

The financial seminar you conducted was extremely enlightening. The information presented will be very useful in helping me plan for the future

E. Ginchansky, M.D.
Allergic Diseases
Dallas, Texas

. . . Your seminar was invaluable in revealing to me that all investments must be basically sound but they become better when wise economic uses of leverage, margin, shelter, renegotiation and no personal liability can be utilized.

Warran A. Ross, M.D.
Orthopedic Surgeon
Austin, Texas

. . . I wish to compliment you on your recent financial workshop in Houston. Your topics regarding the effects of inflation, basic estate planning, proposed tax reforms, tax shelters, and the benefits from negotiation for leverage were concise, informative, and very pertinent. My ignorance about these topics has bothered me for several years. I have been fearful of active inquiry because generally the information comes from salesmen, attorneys, etc., with a secondary motive involved.

Thank you for the most enjoyable, short, educational experience I have ever received.

Donald R. Pohl, M.D.
Urology
Conroe, Texas

. . . Mr. Tallal's Seminar posed some provocative new concepts in financial management. A busy practitioner in medicine should seek out the advice of another expert. The seminar certainly opened some of the doors to avenues of investment to provide sound financial growth

J. M. Finley, M.D.
Family Practice
Beaumont, Texas

. . . The seminar I attended in May on "Rape of the Physician" is a must for every physician starting practice. It lays the foundation to a successful financial existence in the medical profession, that was not taught in medical school

E.P.D.
Emergency Physician
Orange, Texas

. . . I want to take this opportunity to tell you how much I not only enjoyed but profited from your seminar in Houston recently. Keep up the good work.

Professionals need you more than you know. Thanks again.

Best wishes.

George A. Constant, M.D.
Neurology & Psychiatry
Victoria, Texas

A PRACTICAL 4 HOUR WORKSHOP DESIGNED FOR PROVIDING INFORMATION TO THE PHYSICIAN IN THE AREAS OF HIS PERSONAL FINANCIAL MANAGEMENT.

WHAT HAPPENED TO YOUR 1975 INCOME?

October is not Too Late to Reduce Your 1976 Tax

JANUARY 1, 1977 IS!

If You Have Considered Attending This Workshop in the Past . . .

Don't miss this series

It will be the last of 1976

DALLAS

Date: Oct. 2, 1976
Place: Fairmont Hotel
Ross @ Akard
Room: Parisian
Time: 1:00 p.m.

HOUSTON

Date: Oct. 9, 1976
Place: Worwick Hotel
5701 Main St.
Room: La Fontiane
Time: 12:00 Noon

NEW ORLEANS

Date: Oct. 16, 1976
Place: Marriott Hote
Canal St.
Room: Balcony I.J.K
Time: 1:00 p.m.

REGISTRATION, CANCELLATION, & REFUND POLICY

Registration: Must be made in advance and may be made up to three business days prior to the workshop, subject to confirmation. Complete and return the coupon, or, if you prefer, telephone registrations are acceptable. Early registration is recommended. Telephone (214) 348-6591.

Fees: The full registration fee is $65.00 if enclosed with registration form. Fee at door is $75.00. These fees include the cost of the workshop and all workshop materials. (No charge for spouse).

Cancellations and Refunds: Confirmed registrations can be cancelled up to five business days prior to workshop date. Registrations cancelled later than five days prior to workshop are subject to a $10.00 service charge. Participants who have not cancelled reservations three business days prior to th meeting are subject to the entire fee.

Tax Deduction of Expenses: In the case of an individu there shall be allowed as a deduction all the ordinary a necessary expense paid or incurred during the taxable ye — (2) for the management, conservation, or maintenance property held for the production of income. (See Secti 212, Internal Revenue Code of 1974.) Investment couns fee is deductible as a nontrade or business expense (Rev. R 73-13, 1973-1 C.B.42)

This program will not involve the giving of advice Regards to securities nor the giving of legal advic

(Please return the entire Registration Form below, including mailing label).

REGISTRATION FORM

☐ Yes, I plan to attend the workshop checked below
☐ I am unable to attend any of these scheduled workshops, but please inform me if future workshops are planned.
☐ Check enclosed ☐ I will pay at door.
☐ Dallas Oct. 2, 1976
☐ Houston Oct. 9, 1976
☐ New Orleans Oct. 16, 1976
(please check workshop date)

X _____
Signature

Name _____ Phone _____

Address _____ City, State, Zip _____

☐Check if wife will attend

Additional Registration @ $50.00

Name _____ Phone _____

Address _____ City, State, Zip _____

SEND FORM TO:

Joseph J. Tallal, Jr.
Financial Management
9516 Mill Trail
Dallas, Texas 75238
(214) 348-6591

A lesson in bureaucrat-ese

Talking about health care today necessarily includes a knowledge of a variety of abbreviations, acronyms, and other confusing terms.
In February 1976, the U S Government Printing Office released "A Discursive Dictionary of Health Care" prepared by the staff of the Subcommittee on Health and Environment of the U S House of Representatives. The more than 800 entries leave no doubt that there is a bureaucratic dialect within the English language. Here's a sampling.

Borborygmus: a rumbling, gurgling noise in the intestines.
Chairside: the dental equivalent of bedside.

Crock: deprecating housestaff term for a patient whose illness the housestaff (but not the patient) feels is unreal, nonphysical, or insignificant. Use of the term should be discouraged since it often blinds the user to real patient needs, whether or not correctly perceived by the patient.

Elephant policy: see trolley car policy

Trolley car policy: a facetious name for an insurance policy which is so hard to collect benefits upon that it is as though it provided benefits only for injuries resulting from being hit by a trolley car. Typically used of mail order insurance.

Gork: originally an acronym for "God only really knows," and then used by housestaff for patients whose problems were so mysterious as to defy diagnosis. It has now lost all connection with its original meaning and is used offensively to describe pati-

ents who are, and are likely to remain, comatose.

'Me too' drug: a drug that is identical, similar or closely related to a drug product for which a new drug application has been approved. Many 'me too' drugs on the market are essentially copies of approved new drugs but were introduced by the manufacturers without Food and Drug Administration approval on the theory that the NDA holder, or pioneer drug, had become generally recognized as safe and effective. Other 'me too' products are being marketed with abbreviated new drug applications (ANDAs), which require the submission of manufacturing, bioavailability and labeling information, but not data relating to safety and effectiveness, which are assumed to be established.

Poor: see poverty.

Scientology: a religious movement begun in 1952 which teaches immortality and reincarnation, and claims a sure psychotherapeutic method for freeing the individual from personal problems, increasing human abilities, and speeding recovery from sickness, injury, and mental disorder.

Slip law: in Congress, the final version of an Act of Congress and its first official publication. Each public law is printed in the form of a slip law which also lists, but does not include, the legislative history of the Act, whatever earlier Act may be amended by the new law, as it is amended, or any explanation or interpretation of the law. See also Public Health Service Act.

Swap maternity: a provision in group health insurance plans providing immediate maternity benefits to a newly covered woman but terminating coverage on pregnancies in progress upon termination of a woman's coverage. See also switch maternity and flat maternity.

Turkey: deprecating housestaff term for an inpatient who they feel does not need hospital admission. Such patients are not usually malingerers.

Zoonoses: those diseases and infections which are naturally transmitted between vertebrate animals and man.

Ecological fallacy: the common erroneous assumption that because two things are associated one must be caused by the other.

Hold harmless provision: a provision of law that prevents a governmental entity, institution or other party from suffering additional expenses or loss of benefits as a result of a change in a statute or regulations.

Mark-up: in Congress, a meeting of a Congressional committee at which the committee itself writes law to recommend to the full Congress, makes decisions on appropriations, or otherwise makes policy. Usually takes place after public hearings on the subject matter.

Medicap policy: a supplemental health insurance policy designed to supplement Medicare.

Medical Newsmakers

DR. DONALD M. HAYES has assumed the chairmanship of the new Department of Community Medicine at The University of Texas Medical School at Houston. He was formerly associate dean for community health sciences at the Bowman Gray School of Medicine in Winston-Salem, NC. At Bowman Gray, Dr. Hayes was the first chairman of the Department of Community Medicine and implemented its growth there during the past six years. Dr. Hayes, an internist, specializes in hematology and oncology.

A Southwestern Medical School scientist will share one of Germany's highest medical awards for his work with cholera. DR. RICHARD A. FINKELSTEIN, professor of microbiology at the medical school, has been notified that he and DR. MARK H. RICHMOND, professor of bacteriology at the University of Bristol, have been chosen to share the Robert Koch Prize of approximately $24,000. The awards, which include the Robert Koch medal for each recipient, "are the highest honors that German science and medicine can submit to scientists in the biomedical field who, in addition, have done something for public health," according to the letter of notification. Award ceremonies will be held December 7 in Bonn with presentations by the German Ministry of Health. Dr. Richmond is being recognized for his work on antibiotic resistance.

DR. HENRY W. STROBEL, a biochemist at The University of Texas Health Science Center's Medical School at Houston, has been awarded two research grants totaling over $200,000 by the National Cancer Institute. The grants support studies of how anti-cancer agents are metabolized by specific body tissues. One grant, in the amount of $87,075, funds Dr. Strobel's project entitled "Drug Metabolism and Liver Tumors." The second grant for $122,640, finances his study of "The Effect of Gastro-Intestinal Hormones on Colonic Carcinoma." Both awards cover the three-year period from June 30, 1976 to June 29, 1979.

The American Cancer Society, Texas Division, Inc, elected a slate of officers for the 1976-77 fiscal year at its July meeting in Dallas. The top three spots were filled by DR. S. S. EVANS, McAllen, president; RUSSELL H. PERRY, Dallas, chairman of the board; and DR. F. LAMONT JENNINGS, Galveston, president-elect.

Dr. Hayes

Dr. Finkelstein

New commitments to 45 scientists bring the amount of funds allocated for research this year by the Leukemia Society of America, Inc, to $1,585,000. Included in the new group of scholars are two from Texas, DR. SAMUEL MURPHY of Houston and DR. RICHARD G. SMITH of Dallas. Dr. Murphy's project is entitled, "Guinea Pig Leukemia: A Relevant Animal Model for the Design and Evaluation of Immunotherapy for Acute Leukemia." Dr. Smith's project is "Abnormal Differentiation in Human Lymphoreticular Neoplasia."

Resolutions commending two University of Texas Medical School at Houston scientists for their immediate service in protecting public health and welfare have been presented by the Harris County Commissioners Court. The certificates were awarded to DR. RICHARD CAPRIOLI, director of the school's analytical chemistry program, and to DR. WILLIAM SEIFERT, who identified the mysterious powder, broken open in a Houston field in mid-June, that sent one hundred people to area hospitals. The powder was identified as ortho-chloro benzylidene malononitrile, a restricted substance used in vapor form for military riot control.

San Antonio's DR. HARRY ADLER recently had his first fictional work published by Carlton Press, Inc, New York. *The Crowns and Family* portrays a family with no envy, no jealousy—each family member making a total commitment to the happiness of all. Dr. Adler has written editorials for the Bexar County Medical Society *Medical News* for several years.

The National Retinitis Pigmentosa Foundation, Baltimore, has awarded research

grants to SCOTT F. BASINGER, PhD, and DR. ROBERT E. ANDERSON of Baylor College of Medicine, Houston, on a project involving retinal degeneration. Dr. Basinger is an assistant professor of ophthalmology and Dr. Anderson is an associate professor of biochemistry and ophthalmology at Baylor's Department of Ophthalmology.

DR. JEAN WILSON, professor of internal medicine at The University of Texas Southwestern Medical School and editor of the *Journal of Clinical Investigation*, has been chosen to be the next president of the American Society for Clinical Investigation. Dr. Wilson will succeed DR. JOHN S. FORDTRAN, also a professor of internal medicine at the Dallas medical school, who is current president of the society.

DR. KATHERINE RODGERS, San Antonio pediatrician, was selected as one of six Americans to voice their feelings about the country during a national television special July 4. The messages were televised during NBC's "The Glorious Fourth," and were sponsored by the Mutual Benefit Life Insurance Company.

Several hundred Yoakum County residents turned out on a Saturday afternoon in May to pay tribute to DR. KELLER GREENFIELD who has been practicing medicine in Denver City 20 years. During the ceremonies, Dr. Greenfield was honored with a proclamation issued by the mayor, by plaques from both the local chamber of commerce and the Hospital Board of Yoakum County.

DR. C. F. HAMILTON of Dallas has been appointed to the position of chief, Health Planning and Facilities Branch of Region VI of the Department of Health, Education and Welfare. Dr. Hamilton will be responsible for health planning and health resource development programs in Texas, Oklahoma, Louisiana, Arkansas, and New Mexico. The private practitioner has been involved in regional health planning for the past 12 years, serving on the North Central Texas Council of Governments' Health Planning Council. The past two years he has been vice-chairman of that group.

FRED C. BRINKLEY, JR, former public relations executive for the Texas Pharmaceutical Association, will become secretary of the Texas State Board of Pharmacy this fall. Brinkley will replace retiring JOE H. ARNETTE, who held the pharmacy board's chief administrative job for the past 18 years.

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Recent deaths

Dr. Boysen

Dr. C.C. Cleveland

Dr. E.M. Cleveland

Dr. Arthur Eitel Boysen

Dr. Arthur Eitel Boysen, San Antonio internist, died Feb 25, 1976. He was 71 years of age.

Dr. Boysen, a native of Brownwood, Tex, was graduated from The University of Texas in 1925. He obtained his MD degree from The University of Texas Medical Branch in 1929. Following his graduation from medical school, Dr. Boysen was an intern at City Hospital, St. Louis, and a resident at Presbyterian Hospital, Chicago. He was a former assistant instructor of pediatrics at Rush Medical College and a member of the staff of the Infant Welfare Society, Chicago.

Dr. Boysen entered the US Army in 1941. He was separated from the service in 1945 with the rank of lieutenant colonel. That same year he moved to San Antonio, where he continued to practice until the time of his death.

Dr. Boysen was a member of the Bexar County Medical Society and the American Medical Association.

He is survived by one son, Charles M. Funk, Grenta, La; two daughters, Mrs. Marcia R. Bonilla and Stephanie J. Clausewitz, both of San Antonio; four brothers; and two sisters.

Dr. C. C. Cleveland

Dr. Charles Culberson Cleveland, 81, of Hamilton died April 4, 1976, following a long illness.

Dr. Cleveland was born in Hamilton and spent most of his life there. He was graduated from Hamilton High School in 1911 and attended Meridian Junior College, the old Southwestern Medical School in Dallas, and Baylor College of Medicine, also in Dallas. He received his medical degree in 1916, and interned at St. Paul Hospital, Dallas.

Dr. Cleveland served 18 months in the Army Medical Corps during World War I. He was stationed in France and Germany. Following his discharge, he practiced in Stephenville, Lipan, and Pottsville. In 1922, he returned to Hamilton, and continued to practice there until his retirement in 1974.

The physician was the recipient of numerous honors and awards. Among these were Hamilton's Outstanding Citizen (Chamber of Commerce), 1970; honorary lifetime membership, Lions Club International; charter member, Hamilton Lions Club; Worshipful Master, Rock House Masonic Lodge; 50-year member, Cunningham Post 222, American Legion; and honorary member, Hamilton Volunteer Fire Company.

Additionally, Dr. Cleveland served 15 years as vice-president of Perry National Bank, 20 years as an alderman on the Hamilton City Council, and was a director on the first board of the Hamilton County General Hospital.

Dr. Cleveland also was an honorary member of the Texas Medical Association, a past president and secretary of the Bosque-Hamilton County Medical Society, and a member of the American Medical Association.

Surviving the doctor is his daughter, Tink Cleveland of Hamilton.

Dr. E. M. Cleveland

Dr. Edwin Malcolm Cleveland, a native and long-time resident of Dallas, died March 24, 1976, following a lengthy illness.

Dr. Cleveland, 61, had practiced internal medicine at the Dallas Medical and Surgical Clinic-Hospital since 1948. He had served as clinical associate professor of internal medicine at Southwestern Medical

School and had been on the attending staffs at Baylor University Medical Center and Parkland Memorial Hospital.
Dr. Cleveland attended Mary Harden-Baylor College, Belton, from 1932 to 1935. In 1940, he was graduated from Baylor College of Medicine, Dallas.
He completed an internship and one year of his residency training at Charity Hospital of Louisiana in New Orleans before entering the US Army. He was in the service from 1942 until 1946, at which time he returned to Dallas to complete his internal medicine residency at the Veterans Administration Hospital.
The physician's professional memberships included the Dallas County Medical Society, American Medical Association, Dallas Internists Club, Dallas Academy of Internal Medicine, Dallas Southern Clinical Society, and Dallas Diabetes Association.
Survivors include his wife, Mary Harris Cleveland of Dallas; son, Dr. Robert H. Cleveland of Syracuse, NY; brother, Charles W. Cleveland of Houston; two sisters, Mrs. Charles F. McGee of Waxahachie and Janie Cleveland of Dallas.

Dr. C. F. Gregory

Dr. Charles Francis Gregory, chairman of the Orthopedic Surgery Division of The University of Texas Southwestern Medical School, Dallas, died March 31, 1976, following a heart attack.
Dr. Gregory had been a member of Southwestern's faculty since 1956, and was the William B. Carrell Scottish Rite Professor of Orthopedic Surgery since 1965. He also was chief of orthopedic surgery at Parkland Memorial and Veteran's Administration hospitals, and Children's Medical Center of Dallas.
A native of Battle Creek, Mich, Dr. Gregory completed his undergraduate education in 1942 at Indiana University in Bloomington. He was graduated from the Indiana University School of Medicine, Indianapolis, in 1944, and completed his internship at Wayne County General Hospital, Eloise, Mich. He took a general surgery residency at Leila Hospital, Battle Creek, and an orthopedic surgery residency in Indianapolis at Indiana University Medical Center, where, in 1951, he became an instructor.
Dr. Gregory was active in several professional organizations. He was a past president of the American Orthopedic Association, Texas Orthopedic Association, American Board of Orthopedic Surgery, and the Association of Orthopedic Chairmen. He also was a founding member of the American Trauma Society, and a member of the Dallas County Medical Society, the American Medical Association, Texas Surgical Society, American College of Surgeons and Dallas Southern Clinical Society.
He was the 1953 recipient of the American Academy of Orthopedic Surgery's Kappa Delta Award for research and had been a member of its committee on graduate education. At Southwestern Dr. Gregory had been vice-president of the Faculty Senate and Assembly, and was a member of several committees. In 1973, he was named a representative of the American Board of Medical Specialties to the Liaison Committee on Graduate Medical Education.
He had served on the boards of directors of the Dallas Cerebral Palsy Foundation and the local chapter of the American Cancer Society. Additionally, Dr. Gregory was a member of the Board of Trustees of the University of Dallas from 1960 to 1966, and served on the university's advisory committee.
Dr. Gregory served in the U.S. Navy Medical Corps during 1944-1946 and 1952-1954. He attained the rank of lieutenant.
Survivors include his wife, Dorothy Pyle Gregory of Dallas; two sons, Charles B. Gregory of San Antonio and Michael M. Gregory of Irving; two sisters, Margaret Gregory of Dallas and Floris Neenan of South Bend, Ind; and two grandsons.

Dr. Gregory

Dr. L. W. Jacobsen

Dr. Lloyd William Jacobsen, Dallas plastic surgeon, died Feb 22, 1976, at the age of 43.
Dr. Jacobsen had been chief of the plastic surgery section of the Department of Sur-

Dr. Knight

Dr. Polka

gery at Methodist Hospital, Dallas, since 1970. He also was affiliated with St. Paul, Irving Community, Mesquite Memorial and Brookhaven General hospitals.

A native of Manitoba, Canada, Dr. Jacobsen obtained both his pre-medical and medical education from the University of Manitoba in Winnipeg. After an internship at Winnipeg General Hospital, he came to Texas in 1957 for a general surgery residency at The University of Texas Medical Branch in Galveston.

Returning to Canada, Dr. Jacobsen took a residency in plastic surgery at the University of Toronto. He began his practice in Houston in 1963, and moved to Dallas in 1966.

The doctor was a member of the American Medical Association and the American College of Surgeons (fellow).

Surviving Dr. Jacobsen are his parents, Mr. and Mrs. William Christian Jacobsen; sister, Eileen Oddson; a brother, Ronald P. Jacobsen, all of Winnipeg; and another brother, Brian R. Jacobsen, of Toronto.

Dr. W. R. Knight III

Dr. William Rozelle Knight III, 62, died April 4, 1976 in Houston.

Dr. Knight was a clinical professor of obstetrics and gynecology at Baylor College of Medicine and associate vice-chief of the Obstetrics and Gynecology Department of the Methodist Hospital, Houston.

Dr. Knight, a native of Dallas, had lived in Houston since the age of 5. In 1937 he received his bachelor of science degree from Texas A&M University. While attending A&M, Dr. Knight was a member of the Ross Volunteers. In 1940 he was graduated from The University of Texas Medical Branch, where he was a member of Alpha Omega Alpha honor medical fraternity.

Dr. Knight's internship was at Johns Hopkins Hospital, Baltimore, Md, (1940-1942) and his residency was at the University of Wisconsin Medical School, Madison (1942-1944).

He served as a captain with the US Army Medical Corps in the European Theatre of World War II from 1944 to 1946.

Among the physician's professional memberships were the Harris County Medical Society, American Medical Association, American College of Obstetrics and Gynecology (fellow), Central Association of Obstetrics and Gynecology, Postgraduate Medical Assembly of South Texas (past president), Houston Surgical Society, and Houston Obstetrics and Gynecology Society (past president).

Additionally, he was a past president of the Exchange Club; a master Mason and member of Houston Masonic Lodge No. 1189, A.F. & A.M.; and a member of the Century Club of A&M.

Dr. Knight is survived by his wife, Vera Herbert Knight; four daughters, Mrs. Michael A. Henry, Mrs. Richard R. Cruse, Mrs. Robert L. Albritton and Mrs. Richard S. Coon; his mother, Mrs. William R. Knight II; a sister, Mrs. George C. Shumake, and five grandchildren, all of Houston.

Dr. J. B. Polka

Dr. James Bernard Polka, a San Antonio psychiatrist, died Feb 18, 1976, at the age of 74.

Dr. Polka practiced in San Antonio from 1931 until his retirement Jan 1, 1976. He was a military officer from 1931 until 1946, and was a former assistant health officer for Bexar County.

The native of Victoria, Tex, was graduated from Austin College, Sherman, Tex, with the bachelor of arts degree in 1925. He continued his education at Baylor College of Medicine, receiving his MD degree in 1931. His internship was at the San Antonio State Hospital.

Dr. Polka's professional memberships included the Bexar County Medical Society, American Medical Association, American Psychiatric Association, Texas Neuropsychiatric Society, and Southern Medical Association (life member).

Surviving Dr. Polka are his wife, Jane Blackmon Polka, and son, James Lee Polka, both of San Antonio; brothers, Tom Polka of Luling, Lloyd Polka of Victoria, and several nieces and nephews.

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INTERNIST, BOARD CERTIFIED OR ELIGIBLE for multispecialty clinic on Texas Gulf Coast. Immediate good income without initial investment, expert administrative, radiological and laboratory support, participation in adjacent medical schools educational programs, tax-sheltered investments in clinical associated companies, and early partnership. Reply to AD-645, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PART-TIME MEDICAL ADVISOR, AUSTIN INDEPENDENT SCHOOL DISTRICT. Primary responsibility for providing medical consultation and selected medical services for the School Health Program. Salary $15,000 to $18,000, depending on experience and whether or not board certified. Mileage reimbursement—innovative program. Contact Mr. H. L. Gaines, 6100 Guadalupe Street, Austin, Texas 78752.

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SIX FPs OR GPs NEEDED in town of 14,000 (30,000 draw). Financial help available. Office space available. Contact Thomas R. Ahrend, M.D., 1501 Hailey Street, Sweetwater, Texas 79556.

WANTED: PEDIATRICIAN to join a multispecialty group with two board pediatricians. Guaranteed salary $30,000 plus many fringe benefits. Contact F. L. Phillips, M.D., Glen Valley Clinic, 7630 Bellfort, Houston, Texas 77061.

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PHYSICIANS WANTED: Rapidly growing town of Pearsall, Texas, 55 miles south of San Antonio, needs GP/Surgeons. Large oil deposits recently discovered. Splendid opportunity! New furnished office available next to hospital, terms negotiable. Call collect or write: Phillip Degelia, Frio Hospital, 320 Berry Ranch Road, Pearsall, Texas 78061; 512-334-3617.

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CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed in-patient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: First year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

THE CITY OF AUSTIN IS ACCEPTING APPLICATIONS for the position of Director, Austin-Travis County Health Department. Full medical and administrative direction of local health activities in a $3.8 million department of the city. Must be licensed to practice medicine in Texas, have at least three years of administrative experience, a Master's Degree in Public Health, and be properly certified or possess equivalent training and experience. Salary open. Please send resumes to: Dan H. Davidson, City Manager, P.O. Box 1088, Austin, Texas 78767. Equal employment opportunity employer m/f.

PHYSICIAN NEEDED IN COMMUNITY 45 miles south of Dallas on I-35. New clinic with 3,300 square feet. Population 1,400—large trade area. 20 minutes to one hospital; 30 minutes to another. Contact Box 160, Italy, Texas 76651 or call 214-483-6331.

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WANTED: BOARD CERTIFIED OR ELIGIBLE OBSTETRICIAN-GYNECOLOGIST to join multispecialty clinic in Houston. Starting salary competitive, early partnership available. Contact Business Manager, Glen Valley Clinic, 7640 Bellfort, Houston, Texas 77061; 644-3344.

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INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

PEDIATRICS—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

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EMERGENCY MEDICINE CAREER OPPORTUNITY—for physician wanting full-time long term 2nd career. Trauma center for Central Texas. Ideal weather and location. Starting salary $42,000 plus excellent benefits. Immediate openings. For more info send CV to CTMF, P.O. Box 13023, Austin, Texas 78711.

HAVE A DOCTOR SHORTAGE? (Maybe we can help) The Rural Doctors Group, Inc., A Physician Search/Placement Service, First Federal Plaza, Suite 507, Dept. T-M, 200 East 10th Street (at Brazos), Austin, Texas 78701.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77036.

Situations Wanted

BOARD CERTIFIED EXPERIENCED DIAGNOSTIC RADIOLOGIST with extensive experience in neuro-radiology, vascular procedures and special procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join hospital based group with private office. Available after three months time. Please reply to Ad-622, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BLUE-CHIP PHYSICIAN ASSISTANT looking for position in Austin or Hill Country area. Two years experience, including surgery. Baylor graduate 1973, Houston, Texas. Please reply to Ad-627, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

BOARD CERTIFIED EXPERIENCED OBSTETRICIAN AND GYNECOLOGIST with vast experience in all operative procedures. Wish to relocate in a metropolitan or medium-large university city. Curriculum vitae supplied on request. Excellent references. Wish to join group with private office. Available after three months time. Please reply to Ad-623, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

RADIOLOGIST, BOARD ELIGIBLE with many years of experience. Bilingual English-Spanish, presently in private practice in southern USA. Seeks association or solo practice. Prefers Southeastern Texas, other areas considered. Clear references. Please reply to Ad-644, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WE PRESENTLY HAVE SEVERAL PHYSICIANS, GPs and specialists on file who wish to practice in Texas on a salary basis, with a view to future partnership. How may we help? Medi-Search (recruiting physicians exclusively), 309 Wichita Title Building, Wichita Falls, Texas; 817-322-5269.

NATIONAL BOARD CERTIFIED PHYSICIAN'S ASSISTANT, Texas graduate, AMA accredited program; one year's experience. Seeks full or part-time position in family practice situation. Prefer Dallas-Fort Worth area. Will consider full time position outside DFW area. Resume, curriculum vitae available. Walter Moss, 6912 Heritage, Fort Worth 76134. 817-293-7252.

OBSTETRICIAN AND GYNECOLOGIST, 37, board eligible. Immigrant visa. Ample experience in OBG operation procedures, laparoscopy, fetal monitoring, family planning. Seek association, partner, group or solo practice in Texas. Immediately available. Contact M. K. Chen, M.D., 114 Chateau Place, Whitefish Bay, Wisconsin 53217. Phone 414-962-3257.

OB/GYN—35, FMG. Board certified. Experience in all phases of OB-GYN including fetal monitoring and laparoscopy. Seek association, partner, group or solo practice. Available after three months time. Curriculum vitae supplied on request. Please reply to Ad-649, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

TRYING TO RELOCATE? (Maybe we can help) No charge to the physician. All inquiries kept confidential. The Rural Doctors Group, Inc., A Physician Search/Placement Service, First Federal Plaza, Suite 507, Dept. T-M, 200 East 10th Street (at Brazos), Austin, Texas 78701.

DERMATOLOGIST: Age 43, eleven years experience wishes to relocate in Texas. Two years at present location. Married, no children. Consider solo, partner, or group. University trained. Excellent references. Board eligible. Also consider surrounding states. Have Arkansas and Texas license. ER experience. Please reply to Ad-650, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 828-2761, or write P.O. Box 18237, Dallas, Texas 75218.

OPTICAL COMPANY FOR SALE situated in metropolitan area with gross sales in excess of $225,000, incorporated and enjoys established clientele, glasses and contact lenses dispensed from several offices, personnel including management available to continue operations. Principals only please reply to Ad-597 *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OFFICE SPACE FOR LEASE IN NORTHEAST HOUSTON. 2,268 square feet of office space to accommodate two or three physicians. Predominantly black area with few doctors. Adjacent to pharmacy. Office includes patient waiting room, two reception areas, two doctors offices, lab and x-ray. $200 per month per physician, plus utilities. For additional information contact JoAnne Beakley or Tom Kestler, Beakley Pharmacy, 10811 Homestead at Little York Road, Houston, 77016; phone 358-2031 or 633-2200.

FOR SALE: Due to death of doctor, large established family practice of Dr. J. Edwards Prewett grossing over $100,000 annually. Knowledge of Spanish helpful. FOR LEASE: Long-term lease on clinic building, 2404 South IH 35. Equipment available. Approximately 2,700 sq. ft. including separate dentist's office under lease. Scenic outdoor patio, rock garden, large beautiful trees, plenty parking. Write Mrs. J. Edwards Prewett, 407 Almarion, Austin 78746; or call residence 512-327-0662 or doctors office 512-444-5501.

AUSTIN—NEW PROFESSIONAL PARK. Internist, GP, FP, Peds, OB/GYN sought to associate in group setting for solo practice. Physician population has not kept pace with accelerated growth. University town, new hospital. Call or write: Cannon Professional Park, c/o 3913 Medical Parkway, Austin, Texas 78756. Telephone 512-451-8489.

DEAR DOCTOR: How would you like office space ready-to-go, in an exceptionally progressive small town near the "Big City", but without its pressures and problems? If interested please contact Ad-647, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

I WANT TO RETIRE! Solo family practice grossed over $175,000 in 1975. Texas Gulf Coast. Full time M.D. coverage at local hospital affords freedom. Very congenial medical community. Any terms for purchase of equipment and lease considered. Will keep or sell accounts receivable. Please reply to Ad-648, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

DISCRETIONARY FUNDS IDLE? Discover gems as a fascinating investment. "Gems—The Beautiful Investment" lists 10 reasons investors recognize gemstones' potential. "G-TBI" was reviewed by *Lapidary Journal* as "an excellent little book" that "should enlighten many to the possible returns . . . available in the precious gem market." Shrink-wrapped, soft-bound. $5 postpaid. RLK Productions, P.O. Box 12252, Dallas, Texas 75225.

CONSULTANTS IN FINANCING, BANKING AND FINANCIAL MANAGEMENT. Banc-Services Corporation, Thomas G. White, President, 10400 N. Central Expressway, Suite 102, Dallas, Texas 75231; 214-369-3196.

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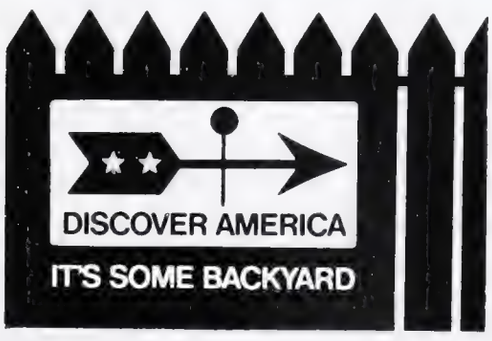

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Leading Causes of Death
United States: 1972 Estimates

Diseases of Heart and Blood Vessels 1,062,160

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WE HAVE YOUR BEST INTEREST AT HEART.

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Editorials

PHYSICIAN PARTICIPATION ESSENTIAL FOR EFFECTIVE FLU IMMUNIZATION

Physician participation is essential if the immunization program for A/New Jersey (swine) influenza is to succeed. But, we may ask, is the program medically necessary? Of course each physician must make an individual decision on this matter, but bear these facts in mind: There are great possibilities for a pandemic, namely, (1) an antigenically new influenza virus, (2) a susceptible population, and (3) demonstrated capability for human-to-human spread of the virus.

A/New Jersey influenza so far has followed an appearance pattern similar to that of Asian and other flu epidemics. The Asian flu surfaced in 1889 and then cropped up again in 1957. In 1975 there was a small outbreak, a period of dormancy, and then several epidemic waves. The 1957 Asian flu produced about 70,000 fatalities. The 1918 A/New Jersey epidemic caused about 500,000 deaths in the United States.

For these and other reasons, the Texas Medical Association's House of Delegates at the 1976 Annual Session in Dallas pledged TMA's full support to protect the populace from A/New Jersey influenza.

Physicians do face risks in the A/New Jersey influenza immunization program. There are definite possibilities for suits, although the recently passed government bill will offer a measure of protection.

Despite the risks, the TMA Executive Board, at its July meeting, decided to give TMA's continued support to the program. We all recognize that a physician's first obligation is to the patient, and we hope that physicians will fulfill their obligations by volunteering their time in public clinics and giving the injections in their offices despite the liability risks.

More than 20 statewide volunteer organizations (including the Woman's Auxiliary to the TMA) under the direction of Mrs. Dolph Briscoe's First Lady Volunteer Program are now participating in the program.

The vaccine and informed consent forms are (or will be) available and distributed by the Texas Department of Health Resources to local health departments who will, in turn, furnish them to private physicians on request. It is hoped that at least 30% of the vaccine will be given in the private physicians' offices and the other portion administered through public health clinics and vaccination centers.

By now, each physician should have received through the mail details from TMA and TDHR regarding the vaccination program. We will attempt to keep physicians informed of future developments as the information becomes available.

If you have any questions regarding the latest information about any part of the program or vaccine, please call or write to your local health department; or to the Texas Medical Association, c/o Steve Carrell, 1801 North Lamar Blvd., Austin, TX 78701, phone 512-477-6704; or to the Texas Department of Health Resources, c/o P. W. Mallory, MD, 1100 West 49th Street, Austin, TX 78756, phone 512-454-3781.

Thomas G. Glass, Jr., MD, San Antonio, Chairman,
TMA Council on Community Health Affairs.

Promote your continuing education programs.

The staff of TEXAS MEDICINE is currently preparing the 1977 Texas Continuing Education Directory for Physicians. The directory will be mailed to all members of the Texas Medical Association in December to assist them in planning their 1977 continuing education schedule.

If your organization will have one or more continuing education programs during the coming year, you will want them listed. This directory will provide greater publicity to all courses which will be offered in Texas and stimulate greater participation in many programs.

Don't miss this opportunity to further promote your continuing education course. Time is limited, so write today for the questionnaire that must be filled out for each listing.

Complete and mail the form below and a questionnaire will be rushed to you.

Do it now!

To: **Mrs. Marilyn Baker, Managing Editor**
TEXAS MEDICINE
1801 North Lamar Blvd., Austin, Texas 78701

Please send me the TMA Continuing Education Course questionnaire in order that my organization may be listed in the 1977 Texas Continuing Education Directory for Physicians.

Name of Course _____

Dates _____

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Name _____

Address _____

City _____ Zip _____

consider the effect on coexisting diabetes when you prescribe a vasodilator*

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*Indications: Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

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Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

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Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500, 1000, 5000 and Unit Dose.

Who can afford to follow doctor's orders?

Medical bills are bad news. Even if all tests show that the patient is healthy, a big bill "for something I didn't even need" is hardly welcome.

Rising medical costs irritate and frustrate those who must fund them, and we are hearing a lot right now about "cost containment." Medical costs have gone up a little—but not much—more than have the costs for all other services. Still, 11.4% of the average household's disposable income goes for health care, and that is a painfully large bite.

The AMA has authorized formation of a National Commission on the Cost of Medical Care to look into the factors involved in rising health care costs which is, of course, one of the most pressing problems facing organized medicine today. On the TMA level, it has been referred to the Council on Medical Service and Insurance.

If the foregoing brings on uneasy feelings of déjà vu, don't worry: You're right, we have trod this path before. In 1968-1969, TMA had a Special Committee on Health Care Costs, chaired by Russell L. Deter, MD, of El Paso. It recommended that physicians seek to reduce the number of days of hospitalization, utilize extended care facilities where possible, participate in local and regional health planning, and seek ways to increase their productiveness and efficiency. It also recommended that patients be educated as to how they can help control health care costs. Sound familiar?

Those recommendations hold up well today, and are a tribute to the thorough and forward-looking approach of that early group.

There are several theories about why medical care costs are rising: health insurance makes medical care feel "freer" to the recipient; government programs are subsidized by taxes and by higher charges to nongovernment patients; federal health expenditures have doubled since 1970, and three times as many people now receive Medicaid benefits; as a populace, we have grown older and we require more medical care; hospital expenses are growing; professional liability insurance rates have done their share to increase overall costs. Probably all these things play their parts.

Until the formally composed AMA commission has recommendations, we Texas physicians can help by finding out how much it costs to carry out our orders for laboratory tests, x-rays, medication, or hospitalization, and weighing carefully the cost and the probable benefit to the patient. Likewise, we can redouble our efforts to teach our patients that good health can't be purchased at any price, but that following simple rules for healthful living usually costs less than repairing the damages wrought by ignoring basic health rules.

L. S. Thompson, Jr., MD, President,
Texas Medical Association.

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Texas Medicine

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Sudden death in infants and adults
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Gerald Ford's Republicans and Jimmy Carter's Democrats are headed for a health care clash in the November elections. The views of the candidates and their parties are outlined beginning on page 98.

NEXT MONTH

Topics for next month will include rheumatoid arthritis, reduction of colon volvulus, the pediatric nurse practitioner, consultation and referral, Sjögren's syndrome, and coxsackievirus B infection in adults.

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Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

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NEWS

New influenza immunization consent form approved

A new informed consent form for the national influenza immunization campaign has been approved by both the Center for Disease Control and the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research. In addition Congress has passed and the President has recently signed a bill protecting swine flu program participants from liability suits in most instances and Texas Department of Health Resources officials are expecting the vaccine to arrive some time in October.

The following form was designed for use with the monovalent vaccine.

Important Information From The U.S. Public Health Service About Swine Flu And Victoria Flu Vaccines (Monovalent)

Introduction

You probably have heard a good deal about swine flu and swine flu vaccine. You may know, for example, that swine flu caused an outbreak of several hundred cases at Ft. Dix, NJ, early in 1976—and that before then swine flu had not caused outbreaks among people since the 1920s.

With the vast majority of Americans being susceptible to swine flu, it is possible that there could be an epidemic this winter. No one can say for sure. However, if an epidemic were to break out, millions of people could get sick. Therefore, a special swine flu vaccine has been prepared and tested which should protect most people who receive it.

Certain people, such as those with chronic medical problems and the elderly, need annual protection against flu. Therefore, besides protection against swine flu, they also need protection against another type of flu (Victoria flu) that was around last winter and could occur again this winter. A separate vaccine has been prepared to give them protection against both types of flu.

These vaccines have been field tested and shown to produce very few side effects. Some people who received the vaccine had fever and soreness during the first day or two after vaccination. These tests and past experience with other flu vaccines indicate that anything more severe than this would be highly unlikely.

Many people ask questions about flu vaccination during pregnancy. An advisory committee of the Public Health Service examined this question and reported that "there are not data specifically to contra-

indicate vaccination with the available killed virus vaccine in pregnancy. Women who are pregnant should be considered as having essentially the same balance of benefits and risks regarding influenza vaccination and influenza as general population."

As indicated, some individuals will develop fever and soreness after vaccination. If you have more severe symptoms or if you have fever which lasts longer than a couple of days after vaccination, please consult your doctor or a health worker wherever you receive medical care.

While there is no reason to expect more serious reactions to this flu vaccination, persons who believe that they have been injured by this vaccination may have a claim. The Congress recently passed a law providing that such claims, with certain exceptions, may be filed only against the United States Government. Information regarding the filing of claims may be obtained by writing to the U.S. Public Health Service Claims Office, Parklawn Building, 5600 Fishers Lane, Rockville, Md 20852.

Below is more information about flu and flu vaccine. Please take the time to read it carefully. You will be asked to sign this form indicating that you understand this information and that you consent to vaccination.

The Disease. Influenza (flu) is caused by viruses. When people get flu they may have fever, chills, headache, dry cough or muscle aches. Illness may last several days or a week or more, and complete recovery is usual. However, complications may lead to pneumonia or death in some people. For the elderly and people with diabetes or heart, lung, or kidney diseases, flu may be especially serious. It is unlikely that you have adequate natural protection against swine flu, since it has not caused widespread human outbreaks in 45 years.

The Vaccine. The vaccine will not give you flu because it is made from killed viruses. Today's flu vaccines cause fewer side effects than those used in the past. In contrast with some other vaccines, flu vaccine can be taken safely during pregnancy.

One shot will protect most people from swine flu during the next flu season; however, either a second shot or a different dosage may be required for persons under age 25. If you are under 25 and a notice regarding such information is not attached, this information will be provided to you wherever you receive the vaccine.

NEWS

Possible Vaccine Side Effects. Most people will have no side effects from the vaccine. However, tenderness at the site of the shot may occur and last for several days. Some people will also have fever, chills, headache, or muscle aches within the first 48 hours.

Special Precautions. As with any vaccine or drug, the possibility of severe or potentially fatal reactions exists. However, flu vaccine has rarely been associated with severe or fatal reactions. In some instances people receiving vaccine have had allergic reactions. You should note very carefully the following precautions:

- *Children under a certain age should not routinely receive flu vaccine. Please ask about age limitations if this information is not attached.
- *People with known allergy to eggs should receive the vaccine only under special medical supervision.
- *People with fever should delay getting vaccinated until the fever is gone.
- *People who have received another type of vaccine in the past 14 days should consult a physician before taking the flu vaccine.

If you have any questions about flu or flu vaccine, please ask.

REGISTRATION FORM

I have read the above statement about swine flu, the vaccine, and the special precautions. I have had an opportunity to ask questions, including questions regarding vaccination recommendations for persons under age 25, and understand the benefits and risks of flu vaccination. I request that it be given to me or to the person named below of whom I am the parent or guardian.

Name _____

Address _____

Birthdate _____ Age _____

County of Residence _____

Signature of person to receive vaccine or Parent or Guardian _____

Date _____

TMA Legal Counsel Advice

There are two informed consent forms, one designed for use with the monovalent vaccine and the other designed for use with the bivalent vaccine.

The informed consent forms will be distributed with the vaccine.

TMA legal counsel advises use of the new federal informed consent form even if a physician is charging for administering the vaccine. If a physician does not charge for the vaccine, does not charge for administration of the vaccine and follows the federal informed consent procedure, he will be protected generally by the new federal law, TMA counsel advises. If the United States has to pay a claim, the United States may sue the physician for that part of the damages resulting only from the physician's negligence. If a physician refuses to cooperate with the government in defense of a claim, it will not defend the physician.

TMA legal counsel recommends use of the vertical line on the left of the registration form intended to be used as a witness signature line. It is recommended that the physician in private practice use the form for the signature and address of some person; for example, an office worker as a witness that the patient understood the form and signed it. TMA legal counsel says whether or not a physician's professional liability insurance policy will cover administration of the A/New Jersey vaccines will depend on individual wording of the policy; however, forms in common use provide such coverage since any liability problems that arise from administration of the vaccine in the physician's office will be governed by and will be similar to other immunizations.

Government regulation discussed at 1976 fall conference

The high cost of government regulations was just one of the topics discussed at the TMA 1976 fall conference in Austin, "Update on Medical Issues." Thomas F. Johnson, PhD,

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NEWS

director of research for the American Enterprise Institute for Public Policy Research (AEI) in Washington, DC, said, "These steps toward greater and greater government interference in the health care market are occurring despite the fact that the results of existing regulations have been so little studied that we do not know yet whether they have increased or decreased the welfare of patients." (Although *Texas Medicine's* press time was before the fall conference, Johnson provided an advance copy of his remarks.)

He cited a lengthy list of the costs of increased government regulations. Costs resulting from regulations accompanying the government's Medicaid and Medicare programs are in the form of substantial increases in paperwork for doctors and hospitals, Johnson said. In 1975 administrative expenses of Medicare and Medicaid added $1 billion to the cost of health care to the American public, Johnson said. He estimated that the administrative costs of federal regulatory functions to the government are now more than $3 billion annually.

More than 800 Texas physicians attended the TMA 1976 fall conference. The conference focused on current medical issues of both national and statewide significance including Medicare and Medicaid legislation, health manpower, implementation of professional standards review

Thomas F. Johnson

organizations, utilization review, health planning and swine influenza immunization.

The guest speakers included Dr. James H. Sammons, executive vice president of the American Medical Association and Sen Lloyd Bentsen of Texas.

Highlights of the conference, actions by councils and boards and reports on the professional liability insurance crisis will be provided in the November issue of *Texas Medicine*.

Study commission begins formulating liability legislation

An ad hoc committee of the Texas Medical Professional Liability Study Commission has been named by Dean W. Page Keeton to draft bills based on subcommittee recommendations for the 1977 legislature. Keeton, for-

Three members of the Texas Medical Professional Liability Study Commission (from left) Page Keeton, former dean of the University of Texas School of Law, Dr. Milton Davis, Dallas and Dr. E. Don Webb, Houston and Dr. L. S. Thompson, Dallas, president of TMA, discuss the state's medical malpractice crisis with members of the news media.

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NEWS

mer dean of the University of Texas School of Law, named the following commission members to the committee: Dr. E. Don Webb, Houston; David Hitt, the executive director of the Baylor University Medical Center; H. Hayes Tucker, representative for the Insurance Counselors of Texas; Harry Hubbard Jr., Texas president of AFL-CIO; Bob Murphy, an insurance agent representative and George E. Pletcher, a Houston attorney. Pletcher will chair the committee.

The commission approved a report showing the malpractice insurance crisis has boosted health care costs and has shrunk availability of care at its August meeting. The report also warned that the malpractice crisis could stifle medical advances. Many doctors are forced to practice "defensive medicine" because of the threat of malpractice suits, said Dr. Milton Davis, a study commission member. Dr. Davis, chairman of the study commission Subcommittee II, the group that submitted the report, said doctors are forced to use medically unnecessary tests, x-rays and consultants to be protected legally in the event of a suit.

The commission also voted to continue the system whereby the State Insurance Board must approve liability insurance rates before they go into effect. The insurance industry had asked the study commission to endorse a "file and use" system of malpractice insurance rates under which the companies would set rates and put them into effect, but then be ready to defend them if the insurance board requested. Joe Christie, chairman of the insurance board, warned the commission that the "file and use" system would be a "repeat of a mistake made 20 years ago" and could cause great confusion. Adjustments on insurance premiums forced by insurance board hearings would be hard to administer, Christie claimed.

The commission will meet again Oct. 15 in the Senate chamber of the Capitol in Austin.

Hobby-Clayton Committee attempts trimming state government costs

Making its first attempt at trimming costs of state government, the Joint Advisory Committee on Government Operations approved recommendations to fully fund existing medical schools permitting expansion to optimum capacities and to authorize no new medical schools without prior approval of the Coordinating Board, Texas College and University System.

The committee, chaired by Lt. Gov. Bill Hobby, sometimes called the Hobby-Clayton committee, approved more than 60 subcommittee recommendations at the Aug 27 meeting in Austin. All recommendations would have to be implemented by the Texas legislature.

The joint committee recommended that the legislature consider a law allowing pharmacists to substitute comparable but cheaper drugs for those prescribed by a physician,unless the doctors specify there can be no substitution. The committee called for the State Board of Pharmacy to determine which drugs could be safely substituted for more expensive brand name prescriptions. TMA president, Dr. L. S. Thompson, Jr, presented a letter to Hobby expressing the association's opposition to the drug recommendation.

"The members of the TMA feel that the pharmacist's knowledge of the chemical characteristics of drugs, their mode of action, toxic properties, etc., should be utilized in making a drug selection; however, since drug product selection entails knowledge derived from clinical experience, the physician's and other prescriber's selections should be carried out relating to medical judgments. The logical retention of complete control of the exact therapeutic regimen for his patients should rest with the physician, if for no other reason than the physician is in the more favorable position to judge when the prescribed therapy is working or not."

The committee passed a resolution approving continued state support for the education of Texas residents at Baylor, but asking the legislature to amend to clarify the basis for calculating the level of state support to be awarded.

Included in other medical education proposals was the recommendation that Texas set as its goal the creation of 300 additional family practice residency positions by 1980 and provide financial support at a level not to exceed one-half the total cost of each residency position. The committee also recommended that Texas provide support not to exceed one-half of the total cost for each residency position as may be necessary to maintain existing family practice residency programs where (other) funding for those existing positions proves to be inadequate. The committee also asked the legislature to consider placing sufficient restriction on acceptance of state supported residencies by medical graduates that will reasonably insure that they will practice in rural areas or underserved urban areas in Texas for not less than three years.

County medical societies surveyed

Are you taking advantage of your county medical society's group health insurance program, phone answering service or placement service? Several societies offer these and other services to members, as documented by a recent Texas Medical Association survey.

The survey was developed by the TMA Membership Department and circulated to 28 Texas county medical societies. The survey findings were presented to the 1976 Conference of Medical Society Executives Aug 6 and 7 in Austin.

The service most widely offered by the 20 responding societies was a membership directory. Eleven societies publish directories and three of those publish directories with pictures.

Six county societies keep membership informed by publishing newsletters, bulletins and/or journals.

Ten of the 20 societies serve the communities as well as the physicians with new patient referral services.

Two also provide community service by sponsoring blood banks.

Seven of the responding societies have available a placement service for nurses, physician assistants and other allied health personnel. Six societies provide this service at no charge.

Several county societies assist premedical, medical and allied health professions students with loans, grants or scholarships. Six societies work with interns, residents and students through a liaison committee.

Group health insurance is offered to members by six societies, a phone answering service by two and printing service by three. The survey also delved into the organization of the 28 societies. Responses show that nine of surveyed societies have a board of censors responsible for checking the credentials of physicians applying for membership.

Twelve societies indicated they meet monthly.

1976 liability survey mailed to physicians

A 1976 Texas Medical Association Professional Liability Insurance Survey was mailed to all regular and provisional members of TMA in mid-September. Its purpose is to update data on physicians' experience with coverage and cost of premiums for professional liability insurance.

The 1976 survey is a followup to the 1975 TMA survey. Physicians are urged to return the surveys. The data will be used to help TMA leaders and staff in updating and preparing to present solutions to the Texas legislature when the issue comes before that body in 1977.

NEWS

TMA provides films

Emergency in Texas—The Malpractice Insurance Crisis, an informative malpractice film, is now available from the Communication Office of TMA. The 10-minute film, developed by Media Communications, Inc of Austin, has been distributed to the metropolitan county medical societies, including Dallas, Houston, Austin, San Antonio and Fort Worth. Physicians are urged to bring the film to the attention of lay groups and civic organizations in Texas communities.

AMA House of Delegates approves resolutions

The American Medical Association's House of Delegates worked hard and long on topics ranging from science to socioeconomics and from peer review to professional liability meeting in Dallas June 27 through July 1 during the 1976 AMA annual convention.
The 254 delegates deliberated over 40 reports and 150 resolutions.
The AMA delegation renewed the support for the association's Medicredit proposals for national health insurance, but decided against seeking legislation to guard against the costs of catastrophic illness. The support for Medicredit marked the eighth straight year delegates have endorsed the association's proposal of tax credits to offset the purchase of comprehensive health insurance. Medicredit would build on the existing system of private health insurance and is in contrast to proposals such as the Kennedy-Corman that would federalize the medical care system to be administered by the Social Security System and supported by compulsory payroll taxes.
The delegates also directed the AMA to study the impact of proposed block-grant federal funding for health care, an approach favored by President Gerald Ford. Concerning insurance and medical service the house urged PSROs and other government mandated review programs to indemnify individuals and organizations for any legal damages awarded as a result of health care review activity and called for nonparticipation. The house strongly opposed use of any system of a universal identifier including Social Security numbers.
The house also expressed great concern with ever-increasing controls and high costs inherent in government-administered medical care programs. Action on the five Texas resolutions was reported in the August issue of *Texas Medicine*.

TWU requests medical school

A request from the Texas Woman's University in Denton, Tex to establish a new school of medicine is one of the agenda items to be considered at the Oct 14 and 15 meeting of the Coordinating Board of the Texas College and University System. The request was submitted to Dr. Kenneth Ashworth, commissioner, July 15.
Any proposals for new schools must be considered by the Coordinating Board before action may be taken to the state legislature.
Dr. William F. Ross, chairman of the TMA Council on Medical Education and Hospitals, will represent TMA at the Oct 14 meeting to present data and views of the association on the expansion of graduate training positions in Texas, particularly in the areas of family practice and primary care. He will also encourage full funding of existing programs in Texas medical schools for doctors of medicine and allied health professionals prior to approval of any new schools. TMA also supports full funding of residencies in the state and supports developing an adequate number of residencies for medical school graduates in the state.

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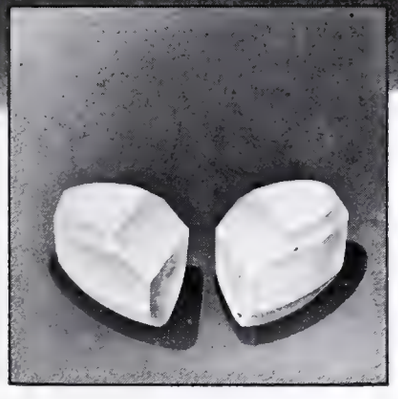

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NEWS

Statistician views health care spending

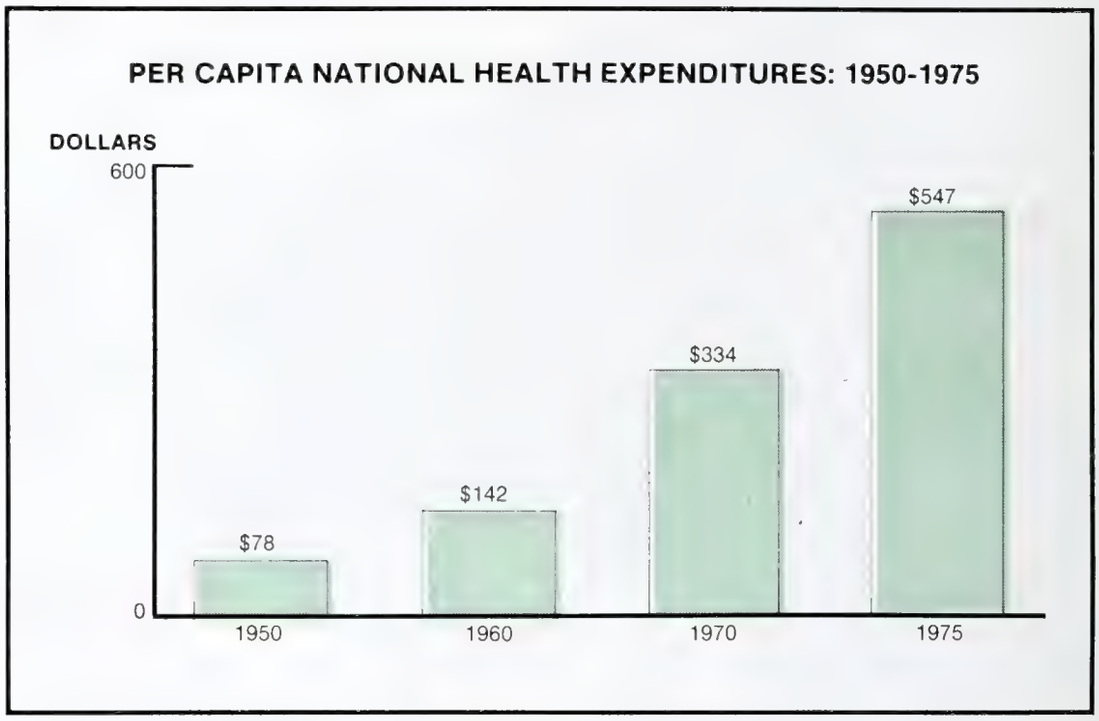
Exactly how much have health care costs gone up, and where, and why? What will happen to them in the future?

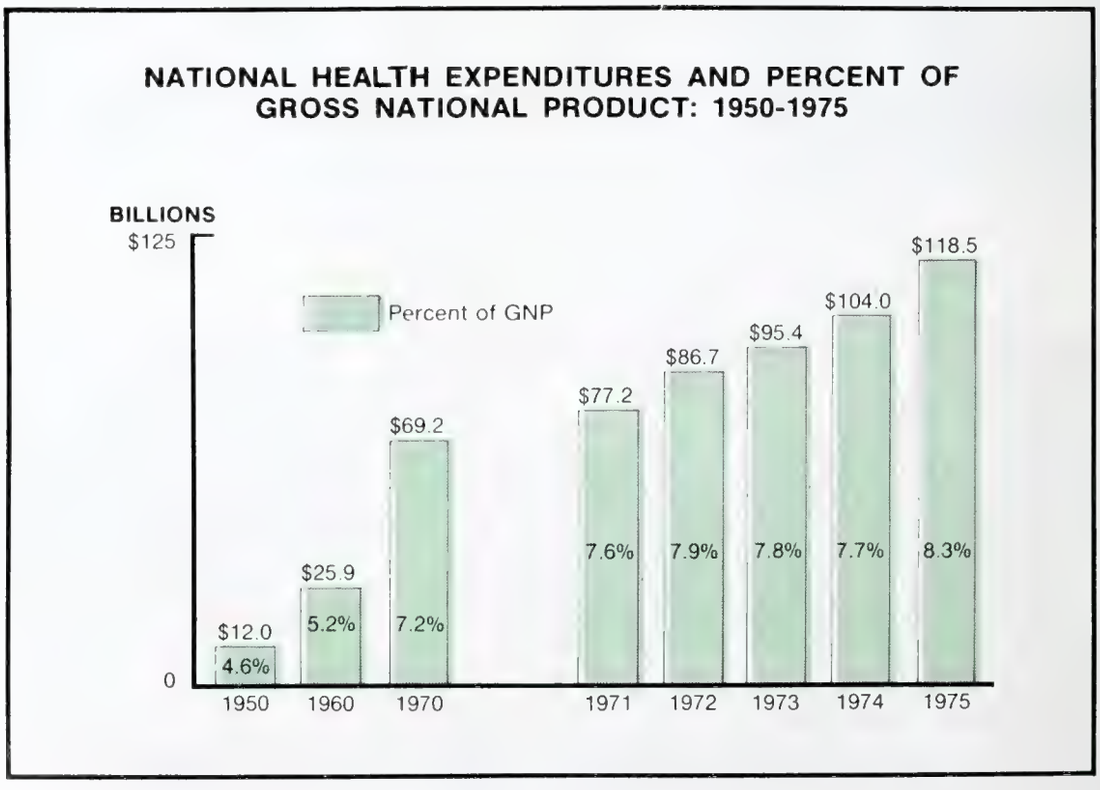
The man with the answers to some of those questions is Vincent P. Barabba, director of the US Bureau of the Census. Armed with a computer and mountains of raw data from past census reports, Social Security Administration figures, and surveys by the National Center for Health Statistics, he has put together a vivid picture of where health care costs have been, and where they're going. Barabba's findings were published in *American Medical News*.

From the mass of figures, a few important points stand out:

—The cost of health care has increased dramatically in the past generation largely because of price increases.

—Each American uses health care services more than his parents did, which further raises the individual





costs as well as total national costs.

—There are more people using health services now than a generation ago, which has increased the total bill.

—As the number of elderly increases, the total cost of health care will increase also by that factor.

Hospital care is the largest element in health care costs—and the most rapidly increasing. In 1950, Americans spent $24 per capita for hospital care; in 1975, they spent $215. Although the proportion of hospital care costs paid directly by the consumer is decreasing because of the growth of third-party payers, the dollar amount paid out of pocket by the consumer for hospital care has increased because of the huge jump in total expenditures.

The Social Security Administration has formally predicted that Americans will spend $1,159 per capita on health care by 1981—more than double what is spent per capita, in only four years.

PHYSICIAN VISITS PER PERSON PER YEAR BY FAMILY INCOME: 1973

PHYSICIAN VISITS PER PERSON PER YEAR BY FAMILY INCOME: 1964

"Approximately 95% of the [U.S.] children of ages 1-5 years had iron intakes below the standard"

U.S. Public Health Service (1974)

Where did that surprising statistic originate?

From the first survey designed to assess the nutritional status of the entire U.S. population. The conclusion above was the most striking result reported in the preliminary findings released in January 1974.

Were they really dealing with a true sample of the entire U.S. population?

Those conclusions were based on a sample of 10,126 people—a probability sample established by the U.S. Bureau of Census to reflect the country's total population, regardless of race or income.

Among those 95% with substandard iron intake, how low was their intake actually?

For whites and blacks, for both sexes, for both income levels, the mean intake of iron (as a percent of the standard) for the 1-5 year age group ranged from 60 to 69%. Typically, then, 95 children out of 100 have iron intakes that are only ⅔ of the standard.

Whose iron intake standard were they using?

The standard set by the Food and Nutrition Board of the National Academy of Sciences for this group.

Implication of all this?

That iron deficiency among preschoolers is anything but rare and signs like mental apathy, lethargy, irritability, behavior problems, may be telegraphing iron deficiency.

Suggesting iron supplementation?

Not necessarily. In many instances this situation can be corrected by proper diet and, obviously, this is the preferred route. When dietary improvement is not attainable, consider a supplement.

But consistent use of an iron supplement is difficult to achieve.

Compliance is a problem, as so much of the recent data suggest.* INCREMIN with Iron Syrup has a pleasant flavor which encourages consistent use.

Is this cited study generally available?

Yes, from the Office of Information, National Center for Health Statistics, 5600 Fishers Lane, Rockville, MD., 20852. Request "First Health and Nutrition Examination Survey", 1974, DHEW Pub. No. (HRA) 74-1219-1.

*B. Blackwell: The Drug Defaulter. *Clinical Pharmacology and Therapeutics* 13:841 (1972).

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1977 Annual Session set

May 12-15 are the dates for the 110th Texas Medical Association Annual Session, scheduled for Houston in 1977.

To date, 30 guest speakers have been secured for the program. In conjunction with the meeting, 21 scientific sections, 32 related organization programs, ten special programs and committee meetings will be scheduled.

Scientific sessions will be at the Holiday Inn—Medical Center. Exhibits will be at the Shamrock Hilton Hotel. Business sessions will be at the Marriott Motor Hotel. The Woman's Auxiliary will be making its headquarters at the Warwick Hotel.

TMA sponsors adventures abroad

The Texas Medical Association will sponsor four adventures abroad in 1977. The first trip is a Trans Panama Canal Air-Sea Cruise beginning Feb 19 and lasting 10 days. Ports of call include the Panama Canal, Balboa; San Blas Islands, Panama; Cartagena, Colombia; Aruba, Netherlands Antilles; La Guaira and Caracas, Venezuela; Grenada and Barbados. The cost of the trip ranges from $998 to $1598 per person.

On June 2 the 14-day Black Sea, Greek Isles Air-Sea Cruise begins. Ports of call include Athens, Mykonos, Hydra and Patmos, Greece; Dikili, Pergamon and Istanbul, Turkey and Yalta and Sochi, Russia. The European Adventure begins in August and lasts 14 days. The European tour includes stops in Zurich, Switzerland; Munich, Germany and Vienna, Austria.

The 14-day Orient Adventure in October includes ports of call of Tokyo and Hakone, Japan and Hong Kong. In addition to the trips listed, the Board of Trustees is considering another shorter trip.

For further information contact Mrs. Jeanette Prentice, Travel Office, Texas Medical Association, 1801 N. Lamar, Austin, Tex 78701, or call 512-477-6704.

Military medical school begins this fall

The Uniformed Services University of the Health Sciences will enroll its first class of medical students November 15 at the Armed Forces Institute of Pathology at the Walter Reed Army Medical Center in Washington, DC.

Dr Anthony R. Curreri, university president, said the school, which has received provisional academic accreditation, will begin with 32 students. During orientation students will become familiar with the military in general and specific aspects of military medicine.

Next year the school will move into permanent facilities on the campus of the National Naval Medical Center, Bethesda, Md. Additional information may be obtained from the Director of Admissions, Uniformed Services University of the Health Sciences, 6917 Arlington Road, Bethesda, Md 20014.

Siamese twin girls separated successfully

Charlotte Marie and Paulette Marie Jones, conjoined twin girls born July 14 at the UT Medical Branch Hospital in Galveston, were separated successfully in an operation Aug 20. The girls were joined at the breastbone, heart cavity, diaphragm, liver and abdominal cavity.

Separation was done without complications and each twin had successful reconstruction of the areas which had been united. The twins were delivered four or five weeks premature by cesarean section and had a combined weight of nine pounds and eight ounces at birth.

Delivery of the twins, the first to be born in the history of the hospital, was done by hospital faculty staff physicians. The twins were diagnosed ultrasonically before birth as being conjoined.

NEWS

New medicare reimbursement policies set for laboratory services

Thomas M. Tierney, director of the Bureau of Health Insurance in the Social Security Administration, says that Medicare reimbursement for a laboratory test performed by an independent laboratory, but billed by the attending physician, must be related to the cost the physician incurred in obtaining the service for the patient.

The Medicare carriers are permitted to allow as reasonable a nominal charge by the physician for the drawing of specimens and handling expenses. However, charges representing merely a physician markup of the charges over and above those actually imposed by an independent laboratory for the test itself are improper, Tierney warns.

Also, an independent laboratory not certified to perform a given test under Medicare may not be reimbursed with Medicare funds even though that test is billed through a physician. Medicare carriers are required to determine the source of the lab service when the source is not indicated on the physician's bill. When the service was performed by an independent lab, the carrier must determine that the laboratory is certified by Medicare to perform such tests.

"Diagnose something significant or don't diagnose me at all."

Review of Medicare claims indicate that some physicians are continuing to submit bills for lab tests without showing that the services were actually performed by independent laboratories, Tierney said. Further questions may be directed to Thomas M. Tierney, director Bureau of Health Insurance, Department of Health, Education and Welfare, Social Security Administration, Baltimore, Md 21235.

Houston student studies healthy breast tissue

Medical researchers have known for some time that certain abnormalities of the breast, such as infections or tumors, have a higher temperature than healthy surrounding tissue. What they haven't known, says a Houston researcher, is what normal temperature for healthy tissue is and how healthy tissue temperature fluctuates according to body rhythms.

Ira Marks, a graduate student researcher at The University of Texas Health Science Center at Houston, School of Public Health, is collecting baseline data on temporal components in breast tissue temperature by having 20 women volunteers wear lightweight temperature sensing devices under their blouses.

Marks and his advisor, Dr. Michael Smolensky, an associate professor at the UT School of Public Health, are investigating circadian (24-hour) and menstrual (roughly monthly) variations in breast tissue temperature. Each volunteer is wearing the device four times, for 48-hour periods spaced about a week apart.

All volunteers are between 21 and 35 years old, and none has a history of breast cancer. Marks' study reportedly is one of the first to address temperature rhythms of healthy women. Existing data, Marks says, have all

been collected from women with advanced inoperable breast cancer.

Knowing the daily and monthly patterns of healthy breast tissue temperature would help in understanding what influences, other than therapy, affect that temperature, Marks and Smolensky say.

An eventual bank of baseline control data about time-related temperature changes in healthy breasts might increase the efficiency of thermography screening as a diagnostic tool and thus enable physicians to detect cancer or other abnormalities at earlier, more easily treatable stages, Marks said.

Data also would enable physicians to better evaluate the success of their treatments of diseased breast tissue, since temperature is often used as an indication of the success of treatment, he said.

Houston hospitals begin centralized food services in 1978

Construction on a centralized food service facility to supply 18,000 meals daily to several Houston and Galveston hospitals began this summer. The central kitchen at 7777 Knight Road, will provide meals for the University of Texas M.D. Anderson Hospital and Tumor Institute, Hermann Hospital, the UT Medical Branch hospitals in Galveston and the UT Medical School cafeteria.

About 120 people will work in the facility, to be administered by M.D. Anderson when it opens in early 1978. The $6.4 million structure will include $3 million in food processing equipment.

The kitchen, that's been in planning for four years, will serve as a solution to the problems of feeding growing numbers of patients, employees and visitors at the hospitals, said Warren L. Rutherford, associate administrator of M.D. Anderson.

After preparation, most of the foods will be frozen or chilled and each day's orders delivered by refrigerated trucks. After arriving at the hospital, patient's trays will be stored in pantries on nursing floors to be heated and served when requested by the patients.

M.D. Anderson expands hospital and treatment facilities

A new hospital wing, clinic building, chapel, radiation therapy center and two floors of facilities for cancer research are all part of the expansion program at The University of Texas M.D. Anderson Hospital and Tumor Institute at Houston.

The five separate construction projects, completed at a cost of more than $60 million, include a 330-bed Lutheran Hospital Pavilion, composed entirely of single-occupancy rooms; an expanded radiotherapy center, housing additional equipment to provide radiation therapy for cancer patients; an inter-denominational chapel, including a sanctuary, family counseling areas and offices for hospital volunteers and approximately 100,000 square feet of research space added as two new floors to the existing Anderson building in the Texas Medical Center.

The additions will increase M.D. Anderson, created 35 years ago by the Texas legislature, from 580,000 square feet to about 1.2 million square feet. Just before Christmas 1942, a five-member staff, all borrowed from the UT Medical Branch at Galveston, began work in a converted residence near downtown Houston under the supervision of acting director Dr. Ernst W. Bertner.

Patient care began in 1944, using an 18-room temporary clinic on the grounds of "The Oaks" and leased beds in a Houston hospital. Dr. R. Lee Clark was appointed M.D. Anderson's first full-time director by the Board of Regents in 1946. Dr. Clark, whose

NEWS

title was changed to president in 1968, has guided the cancer center as its only chief for more than 30 years.

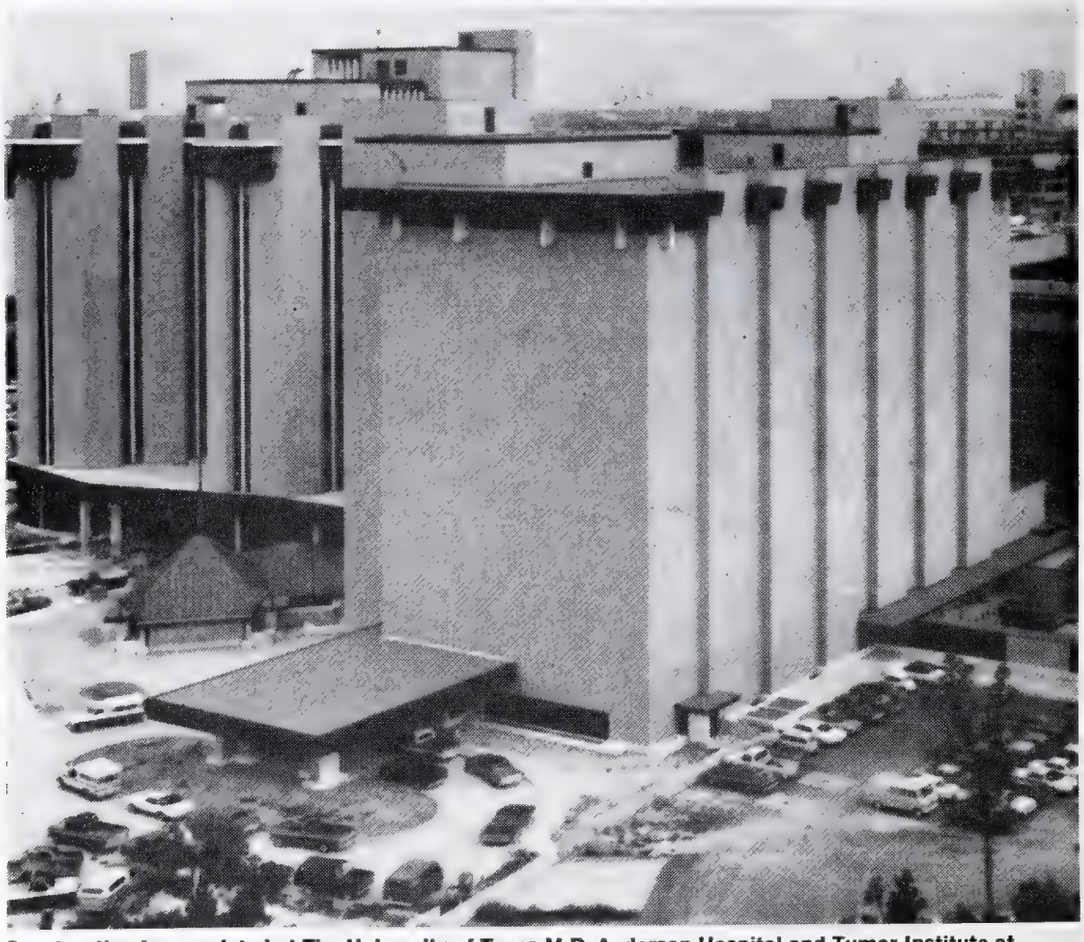
The first permanent Anderson facility opened in the Texas Medical Center in March 1954, when 46 patients were transferred from the makeshift hospital at "The Oaks." Major additions adding more research and laboratory space to Anderson were completed in 1969. The Anderson Mayfair, an extended patient care and family hotel, also opened in 1969.

Since patient care began at the hospital in 1944, more than 119,000 persons have been treated. Of all Texans cared for at Anderson, about one-third have been medically indigent and received care at no cost to themselves. By state law, M.D. Anderson is a "referral hospital," accepting patients who have been referred by personal physicians. During 1975, M.D. Anderson physicians cared for 21,235 patients or approximately nine per cent of all people under treatment for cancer in Texas.

New CHAMPUS policy approved for nonavailability guidelines

New policy guidelines for CHAMPUS (Civilian Health and Medical Program of the Uniformed Services) beneficiaries have been established resulting from new Defense Department policy. Unless a nonavailability statement has been issued, CHAMPUS now is prohibited from paying for nonemergency inpatient care from a civilian source when care is available at a Uniformed Services facility within a 40-mile radius of the patient's residence.

Another provision tells commanders of Uniformed Services hospitals to look again at local conditions to identify those under which they might authorize inpatient care from civilian sources for CHAMPUS beneficiaries. Special consideration will be given



Construction is completed at The University of Texas M.D. Anderson Hospital and Tumor Institute at Houston. At left back is the Lutheran Hospital Pavilion. The M.D. Anderson-Lutheran Interdenominational chapel is shown at center and at right is the clinic building.

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anyone living on the edge of a 40-mile radius who must travel more than 40 miles to a Uniformed Services hospital. The beneficiary must prove the travel distance is more than 40 miles.
A nonavailability statement will be valid for 60 days when a patient requires additional inpatient care for the same diagnosis, for complications from the original care, or for follow up care. A nonavailability statement issued for chronic conditions such as cancer and kidney dialysis that require repeated admissions or continuity of care will be valid for 12 months.
While in a travel status, a person who seeks nonemergency inpatient care from a civilian source will need a nonavailability statement if that care is to be received within a 40-mile radius of a Uniformed Services hospital. A person confined to bed on a physician's order will not have to appear in person at a Uniformed Services medical facility to get a nonavailability statement, if a civilian physician certifies in writing that the person is confined to bed.
Nonavailability statements issued outside of the United States will not be valid in the United States and nonavailability statements issued in the United States will not be valid in foreign areas. Anyone with a question about nonavailability statements should contact a CHAMPUS advisor at a local Uniformed Services medical facility or write to: O CHAMPUS, Denver, Colo 80240.

Dial access system updates information

A new booklet, Dial Access System 1976, has been published by the Southern Medical Association Center Education Services and co-sponsored by the University of Texas System Cancer Center including the M.D. Anderson Hospital and Tumor Institute.
The Dial Access System makes available without charge the most recent diagnostic and therapeutic information on specific neoplastic disease problems. Physicians, dentists, nurses and students can use the services by dialing the appropriate telephone number and requesting by number any of the topics listed in the new catalog.
The topics range from anesthesia to the central nervous system to nursing to related oncology and include 350 messages for the cancer education through telephone consultation program. Each six to eight minute message including three references was written by an authority on the subject and is narrated personally by the authority or by a professional announcer.
Hours are Monday through Friday 9 am through 9 pm and Saturday 10 am through 2 pm (Eastern Time), excluding major holidays.
The telephone numbers are in Houston: 790-1683; in Texas (except Houston): 1-800-392-3917, other states (toll free): 1-800-231-6970.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST
(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 8/30/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+11.3%	−33.0%	− 6.2%	1.2%
Loomis-Sayles Mutual Fund	+ 7.5%	−21.0%	− 3.7%	3.2%
Mercantile Bank Equity Fund	+12.2%	−35.8%	−16.5%	3.5%
Mercantile Bank Fixed Income Fund	+ 4.5%	−13.5%	− 8.6%	7.7%
T Rowe Price Growth Stock Fund	+ 9.4%	−34.1%	− 1.9%	2.1%
T Rowe Price New Income Fund	+ 2.7%	N/A	N/A	7.9%
Stein Roe & Farnham Balanced Fund	+ 8.1%	−24.9%	+ 4.1%	3.1%
Standard & Poor 500 Stock Average	+14.1%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+14.2%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

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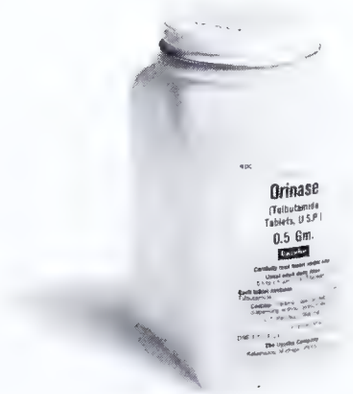

This new design will help pharmacists, physicians, nurses, and patients identify Orinase by name and manufacturer. The number on the tablet is for identification and is not related to tablet strength.

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CAPITAL COMMENTS

WASHINGTON: TEXAS CONGRESSMAN ASKS FOR PSRO REPEAL. Rep Ron Paul, MD (R-Lake Jackson, Tex) has introduced HR 14790 to repeal provisions establishing professional standards review organizations.

AUSTIN: JOINT UNDERWRITING ASSOCIATION REPORT. From Jan 1, 1976, through June 29, 1976, the Joint Underwriting Association wrote 1,198 primary risk policies (1,038 doctors, 119 professional associations and 41 hospitals) and 847 excess layer coverage policies totaling 2,045. Since inception the Joint Underwriting Association has written policies for 1,340 doctors, 166 professional associations and 56 hospitals for primary risk and 847 excess layer coverage policies, totaling 2,409. Those figures do not include policies for 640 interns, residents and fellows of the Baylor College of Medicine written in July.

WASHINGTON: TEXAS CONGRESSMAN ASKS FOR HEALTH PLANNING REPEAL. Rep Sam Hall, (D-Tex) has introduced HR 14826 to repeal Title XV and XVI of the Public Health Service Act. The bill has been referred to the House Interstate and Foreign Commerce Committee.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

AUSTIN: MEDICAL EDUCATION. The Texas House of Representatives Committee on Higher Education recently appointed subcommittees for interim studies. The subcommittee on medical education is chaired by Rep Fred Head (D-Athens). Other members of the committee, that met in Austin in September, are Rep Don Rains (D-San Marcos) and Rep R. B. McAlister (D-Lubbock).

WASHINGTON: RELATIVE VALUE SCALES. The Federal Trade Commission has accepted agreement by unanimous vote containing consent orders that require the American Academy of Orthopaedic Surgeons and the American College of Obstetricians and Gynecologists to discontinue relative value scale activities since the scales may influence the fees the members charge.

AUSTIN: SPECIAL ELECTION HELD. Brad Wright (R-Houston) was elected Aug 14, 1976 to fill the unexpired term of Rep Kay Bailey, who resigned as representative of District 90 of Harris County. She accepted a position with the National Transportation and Safety Board in Washington.

WASHINGTON: TEXAS HMO RECEIVES FEDERAL QUALIFICATIONS. Prudential Health Care Plan, Inc, of Houston has received federal certification as a health maintenance organization.

WASHINGTON: DRUG ABUSE NARCOTICS. The Speaker of the US House of Representatives has appointed a select committee on narcotics abuse and control. Rep E. (Kika) de la Garza (D-Mission, Tex) is a member of the committee.

WASHINGTON: NATIONAL CERTIFICATION OF HEALTH PROFESSIONALS PROPOSED. The Health Manpower Subcommittee of the HEW has recommended national standards and national certification for health professionals. In a preliminary report, HEW said the subcommittee's proposals, although still tentative, seek to end "a patchwork system" of licensure in the 50 states. Earlier reports in 1971 and 1973 had urged the states to observe a moratorium on legislation dealing with the licensure of health occupations. The HEW subcommittee, headed by Harris S. Cohen of the Office of Policy Development and Planning, now offers five other recommendations: limiting federal reimbursement for health services to professionals who are either licensed by state boards that have adopted national standards or are certified by organizations that have adopted national standards and have been approved by the proposed National Certification Council, establishing criteria for state licensure, strengthening the accountability and effectiveness of licensure boards, developing proficiency examinations and creating mechanisms for assuring continued competence.

WASHINGTON: HEW MOVES TO ESTABLISH PRTs. HEW is moving to establish entities authorized by the 1972 Social Security Amendments called Program Review Teams (PRT). Charters of ten nine-member teams, one from each of ten states have already been approved. The PRTs are to aid HEW in determining whether to exclude providers or practitioners from the Medicare program as well as the Medicaid and Maternal and Child Health Programs on grounds of misrepresentation, excessive charges, over-utilization of services or the delivery of "grossly inferior" care. Each team will consist of four physicians, three other health professionals and two consumer representatives. Under the mandate of Section 229 of the 1972 law, all states are eventually to have one or more PRTs operating. Final regulations governing the teams were published in August. The teams are to coordinate their activities with the professional standards review organizations operating in the same area.

WASHINGTON: HEALTH PLANNING LAW CHALLENGED. A US District Court in Raleigh, NC, has granted the AMA permission to join in the State of North Carolina's lawsuit against the federal government's National Health Planning and Resources Development Act (PL 93-641). The AMA will now enter the case as co-plaintiff. The US District Judge has also granted the plaintiff's motion to transfer the case to a three-judge district court.

WASHINGTON: HEALTH MANPOWER-PHYSICIAN COMPETENCE. HEW/HRA Division of Medicine has awarded a $267,229 contract to the National Board of Medical Examiners to develop new ways to evaluate physician competency.

CALIFORNIA: KING OF TORTS SUED FOR MALPRACTICE. Melvin M. Belli and his law partners were found liable for legal malpractice by San Francisco Superior Court recently and told to pay a judgment of $200,000. The basis of the suit against Belli and his partners was negligent handling of a medical malpractice suit. Three California trial lawyers testified that it is a malpractice lawyer's duty to get all the facts and round up all appropriate records and witnesses in such cases. If the lawyer doesn't do so, they said, then he is performing below the standard of good legal practice.

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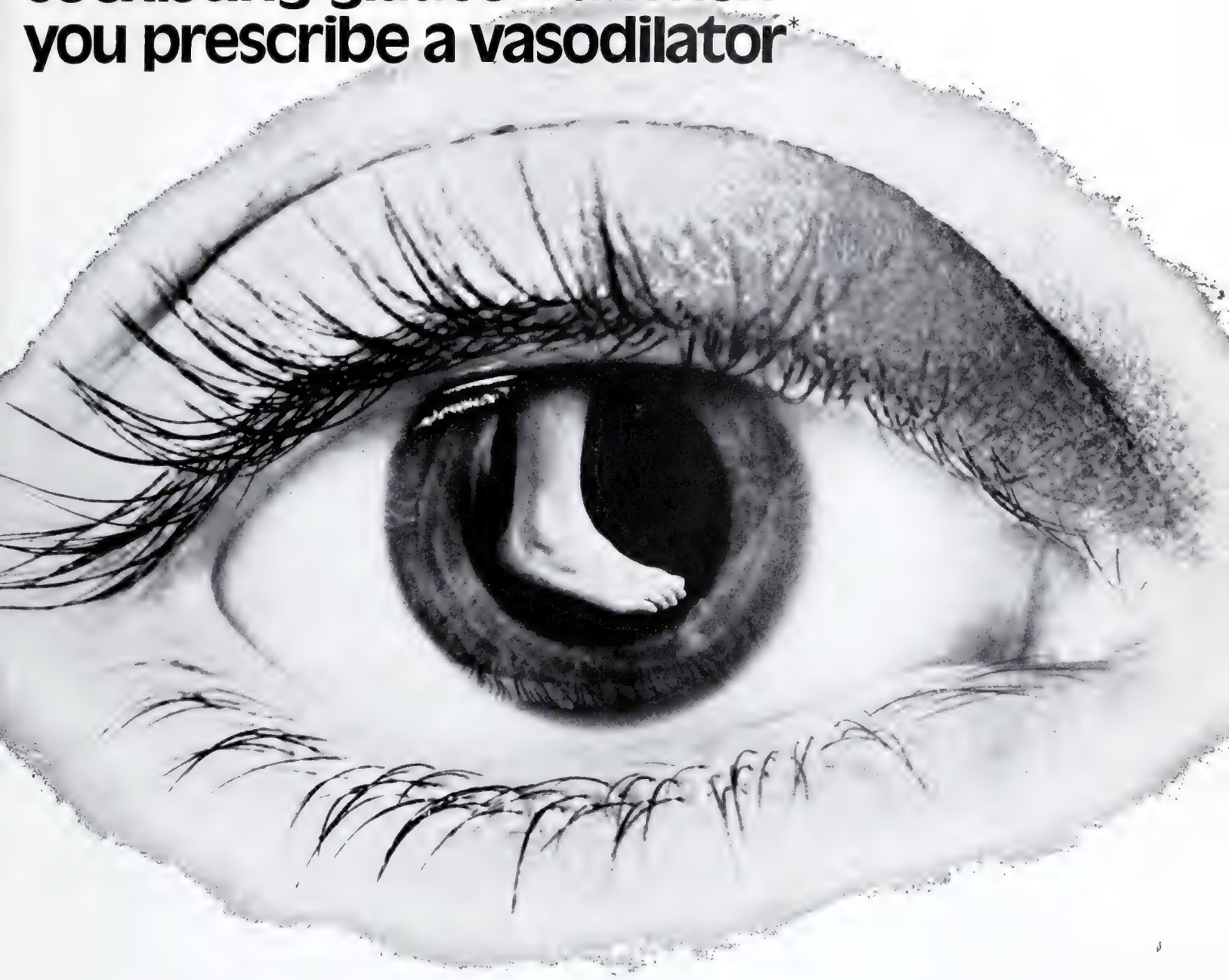

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COMING MEETINGS

AMERICAN MEDICAL TENNIS ASSOCIATION

The American Medical Tennis Association will host the Fifth Annual World Medical Tennis Society tournament Oct 17-22, 1976, at Lakeway World of Tennis, Austin. Physicians and their spouses will compete in singles, doubles, and mixed doubles events. A scientific program will include discussions of etiology and treatment of tennis elbow, bio-mechanical aspects of tennis elbow, elbow injuries sustained by average players, tennis shoulder, clinical aspects of tennis injuries, and others.

Contact: Box 183, Alton, Ill 62002.

ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES

Theme of the 83rd annual meeting of the Association of Military Surgeons of the United States is Spirit of Federal Medical Support for 1976. The meeting is scheduled Oct 31-Nov 4, 1976, in San Antonio. A plenary session, section meetings, and exhibits are among the events on the program. All functions, except ladies' activities, will take place in the Convention Center. The Surgeon General, USAF, has granted Category I credit toward the AMA Physician's Recognition Award for attendance. There is a registration fee of $15 for AMSUS members, and a $20 fee for non-members.

Contact: 10605 Concord St, Suite 306, Kensington, Md 20795.

TEXAS ACADEMY OF FAMILY PHYSICIANS

The 27th Annual Scientific Assembly of the Texas Academy of Family Physicians will take place Oct 17-19, 1976, at the Marriott Motor Hotel, Dallas. The Assembly is presented in cooperation with Southwestern Medical School. The program will include presentations on indications and contraindications of oral contraceptives, colposcopy in the evaluation of the abnormal pap smear, basic immunology for the family physician, the foot: child and adult, and medico-legal pitfalls in everyday practice. The meeting will conclude Tuesday night with a dinner/dance.

Contact: 1905 N Lamar Blvd, Austin 78705.

CURRENT MEETINGS IN TEXAS

NUECES COUNTY MEDICAL SOCIETY, workshop on Genetics and You, Emerald Beach Holiday Inn, Corpus Christi, Oct 7-8, 1976. Cosponsored by Coastal Bend Health Science Consortium, Driscoll Foundation, HE Butt Foundation, National Foundation March of Dimes, Texas Department of Mental Health and Mental Retardation. Limited to 300 participants. Program divided into non-physician, physician and combined sections. Physician program features Dr. Joseph Warkany, Cincinnati; Dr. Raymond Lewandowski, Denton; Dr. Gerald Powell, Galveston; Dr. Mary Kukolich, Denton. Contact: Box 5280, Corpus Christi 78405.

PANHANDLE DISTRICT MEDICAL SOCIETY, Annual Meeting, Hilton Inn, Amarillo, Oct 2, 1976. Sessions on cancer of the breast, lymphomas. Speakers include Dr. Sigudur Bjornsson, Roswell Park Memorial Institute, NM; Dr. F Lamont Jennings, Pathology Department, UT Medical Branch, Galveston; Dr. Morton M Kligerman, director, Cancer Research, University of New Mexico School of Medicine; Dr. Arthur S Levine, chief, Pediatric Oncology, National Cancer Institute. Contact: Box 3276, Amarillo 79106.

CURRENT NATIONAL MEETINGS

AMERICAN GROUP PRACTICE ASSOCIATION, 27th Annual Meeting, Americana Hotel, Bal Harbor, Fla, Oct 5-8, 1976. Mini-clinics deal with: physician compensation and organization stability, medical records—prerequisite for peer review, quality assurance—how to set up your program, selection and evaluation of medical/administrative clinic leadership team, personnel relations and unionization, safety and security problems in group practice, recruiting of physicians, personal financial planning for retirement, others. Golf, tennis, fishing, bridge tournaments, postconvention tours. Contact: 20 S Quaker Lane, Alexandria, Va 22314.

For other courses and symposiums, see Continuing Education Courses, pp 38-40.

Calendar of Listings

■ Denotes Texas Meetings

OCTOBER

AMERICAN ACADEMY OF PEDIATRICS, Washington, DC, Oct 16-21, 1976. 5320 Pine Ridge Ave, Cheyenne, Wyo 82001.

AMERICAN ASSOCIATION OF BLOOD BANKS, San Francisco, Oct 31-Nov 5, 1976. 1828 L St, NW, Washington, DC 20036.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tuscon, Ariz, Oct 3-6, 1976. Box 912, DTS, Omaha 68101.

AMERICAN BOARD OF FAMILY PRACTICE, Certification examination, Seven cities throughout the US, Oct 30-31, 1976. Dr. Nicholas J Pisacano, Exec Dir-Sec, University of Kentucky Medical Center, Lexington, Ky 40506.

AMERICAN COLLEGE OF ALLERGISTS, Toronto, Oct 13-15, 1976. Frances P White, 2141 14th St, Boulder, Colo 80302.

AMERICAN COLLEGE OF CHEST PHYSICIANS, Atlanta, Oct 24-28, 1976. 911 Busse Highway, Park Ridge, Ill 60068.

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, New Orleans, Oct 12-14, 1976. 241 E Saginaw, E Lansing, Mich 48823.

AMERICAN COLLEGE OF GASTROENTEROLOGY, Montreal, Oct 24-30, 1976. 299 Broadway, New York 10007.

AMERICAN COLLEGE OF SURGEONS, Chicago, Oct 11-15, 1976. 55 E Erie St, Chicago 60611.

AMERICAN GERIATRICS SOCIETY, WESTERN DIVISION, Phoenix, Ariz, Oct 8-9, 1976. Dr. Julius Schwimmer, 13000 N 103rd Ave, Ste 54, Sun City, Ariz 85351.

AMERICAN GROUP PRACTICE ASSOCIATION, Bal Harbour, Fla, Oct 5-9, 1976. 20 S Quaker Lane, Alexandria, Va 22313.

AMERICAN HUMANE ASSOCIATION, Denver, Oct 28-30, 1976. Children's Division, Box 2788, Denver 80201.

AMERICAN MEDICAL ASSOCIATION AUXILIARY, Chicago, October, 1976. 535 N Dearborn St, Chicago, 60610.

■ AMERICAN MEDICAL TENNIS ASSOCIATION, Austin, Lakeway World of Tennis, Oct 16-23, 1976. Box 13, Alton, Ill 62002.

AMERICAN MEDICAL WRITERS ASSOCIATION, Detroit, Oct 6-10, 1976. 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN SCHOOL HEALTH ASSOCIATION, New Orleans, Oct 7-10, 1976. Box 708, Kent, Ohio 44240.

AMERICAN SOCIETY OF ANESTHESIOLOGISTS, San Francisco, Oct 9-13, 1976. 515 Busse Hwy, Park Ridge, Ill 60068.

AMERICAN SOCIETY OF INTERNAL MEDICINE, Cambridge, Mass, Oct 8-9, 1976. William R Ramsey, Exec Officer, 703 Market St #535, San Francisco 94103.

AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS, Los Angeles, Oct 15-22, 1976. 2100 W Harrison St, Chicago 60612.

ASSOCIATION OF AMERICAN PHYSICIANS AND SURGEONS, Scottsdale, Ariz, Oct 21-23, 1976. 2111 McDonald's Dr, Suite N-515, Oak Brook, Ill 60521.

■ AMERICAN SOCIETY FOR MICROBIOLOGY, Austin, Oct 6-8, 1976. 1913 I St, NW, Washington, DC 20006.

ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA, Washington, DC, Oct 11-13, 1976. 200 Berkeley St, Boston 02117.

■ ASSOCIATION OF MILITARY SURGEONS OF THE UNITED STATES, San Antonio, Oct 31-Nov 4, 1976. 10605 Concord St, Kensington, Md 20795.

GERONTOLOGICAL SOCIETY, New York, Oct 13-17, 1976. 1 Dupont Circle, Ste 520, Washington, DC 20036.

INTERNATIONAL ACADEMY OF PATHOLOGY, Washington, DC, Oct 17-23, 1976. c/o Dept of Pathology, University of Indiana Medical Center, Indianapolis 46202.

INTERNATIONAL ASSOCIATION OF SOCIAL PSYCHIATRY, Yugoslavia, October, 1976. Dr. John J Carleton, 2323 Oak Lane, Santa Barbara, Calif 93105.

INTERNATIONAL CONGRESS OF ALLERGOLOGY, Buenos Aires, October, 1976. Dr. LL Henderson, Sec Gen, Mayo Clinic, Rochester, Minn 55901.

INTERNATIONAL FEDERATION OF GYNECOLOGY & OBSTETRICS, Mexico City, October, 1976. Av Baja California 317-301, Mexico 11 DF.

LEUKEMIA SOCIETY OF AMERICA, INC, Oct 28-30, 1976, Washington, DC. Meade P Brown, Exec Officer, 211 E 43rd St, New York 10017.

PAN AMERICAN MEDICAL ASSOCIATION, Hollywood, Fla, Oct 24-29, 1976. 745 Fifth Ave, New York 10022.

■ PANHANDLE DISTRICT MEDICAL SOCIETY, Amarillo, Oct 2, 1976. Box 3276, Amarillo 79106.

SOUTHERN PSYCHIATRIC ASSOCIATION, Williamsburg, Va, Oct 2-5, 1976. Annette S Boutwell, Exec Officer, Box 10387, Raleigh, NC 27605.

■ TEXAS ACADEMY OF FAMILY PHYSICIANS, Dallas, Oct 17-19, 1976. Donald C Jackson, Exec Dir, 1905 N Lamar Blvd, Austin 78705.

TEXAS ASSOCIATION OF PHYSICIANS IN NUCLEAR MEDICINE, Location to be determined, Oct 30-31, 1976. Dr. Fred W Riley, Jr, Pres, 3718 Hundred Oaks, San Antonio 78217.

TEXAS DERMATOLOGICAL SOCIETY, Las Palmas, Canary Islands, Oct 30-Nov 7, 1976. Dr. William F Spiller, 1111 N 10th St, McAllen, Tex 78501.

■ TEXAS ORTHOPAEDIC ASSOCIATION, Salado, Tex, Oct 16, 1976. Dr. Donald E Pisar, Sec-Treas, Scott & White Clinic, Temple, Tex 76501.

■ TEXAS STATE BOARD OF EXAMINERS IN THE BASIC SCIENCES, Austin, Oct 15-16, 1976. 319 Sam Houston State Office Bldg, Austin 78701.

NOVEMBER

AMERICAN ACADEMY OF MAXILLOFACIAL PROSTHETICS, San Diego, Calif, Nov 8-10, 1976. 110 S Jerge Dr, Elma, NY 14059.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Newton, Mass, Nov 8-12, 1976. 430 N Michigan Ave, Chicago 60611.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tucson, Ariz, Nov 28-Dec 2, 1976. Box 912, Omaha 68101.

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS, Atlanta, Nov 17-21, 1976. 11239 S Lakewood Blvd, Downey, Calif 90241.

AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Miami Beach, Fla, Nov 5-10, 1976. Robert R Weilacher, Exec Dir, 7411 Hines Place, Dallas 75235.

AMERICAN BOARD OF PATHOLOGY, Chicago, Nov 18-20, 1976. 1820 Exchange Natl Bank Bldg, 610 N Florida Ave, Tampa, Fla 33602.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN HEART ASSOCIATION, Miami Beach, Fla, Nov 15-19, 1976. 44 E 23rd St, New York 10010.

■ AMERICAN SOCIETY OF CYTOLOGY, Houston, Nov 3-6, 1976. Dr. Warren R Lang, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 1006, Philadelphia 19107.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, San Francisco, Nov 11-15, 1976. One Dupont Circle, NW, Washington, DC 20036.

FLORIDA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Orlando, Fla, Nov 21-24, 1976. Registrar, Pediatric Emergencies, 1919 Beechway Rd, Suite 5C, Jacksonville, Fla 32207.

■ MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Houston, Nov 11-12, 1976. Stephen C Stuyck or Dr. Margaret Davis, MD Anderson Hospital and Tumor Institute, Houston 77030.

MEDICAL SOCIETY OF THE STATE OF NEW YORK, New York, Nov 7-11, 1976. 420 Lakeville Rd, Lake Success, NY 11040.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Guadalajara, Mexico, November, 1976. c/o Virginia Bryant, 333 W Thomas Rd, Phoenix, Ariz 85013.

MEDICAL SOCIETY OF VIRGINIA, Williamsburg, Va, Nov 4-7, 1976. 4205 Dover Rd, Richmond, Va 23221.

MID-AMERICAN BREAST CANCER SYMPOSIUM, Madison, Wis, Nov 5-6, 1976. William B Hobbins, Pres, Wisconsin Breast Cancer Detection Foundation, Inc, 7803 Mineral Point Rd, Madison, Wis 53717.

NATIONAL ASSOCIATION FOR MENTAL HEALTH, Philadelphia, Nov 16-19, 1976. 1800 N Kent St, Arlington, Va 22209.

NATIONAL EYE RESEARCH FOUNDATION, Las Vegas, Nev, Nov 7-11, 1976. 18 S Michigan Ave, Chicago 60603.

NATIONAL KIDNEY FOUNDATION, Washington, DC, Nov 17-21, 1976. 116 E 27th St, New York 10016.

NEW YORK STATE SOCIETY OF DERMATOLOGY, New York, Nov 8, 1976. 420 Lexington Ave, Ste 443, New York 10017.

NEW YORK STATE SOCIETY OF INTERNAL MEDICINE, New York, Nov 10, 1976. 420 Lexington Ave, Ste 443, New York 10017.

OKLAHOMA HOSPITALS BREAST CANCER CONTROL NETWORK, Oklahoma City, Nov 10-11, 1976. 825 Northeast 13th St, Oklahoma City 73104.

PAN AMERICAN ASSOCIATION OF OTO-RHINO-LARYNGOLOGY AND BRONCHOESOPHAGOLOGY, New Orleans, Nov 7-11, 1976. 10921 Wilshire Blvd, Los Angeles 90024.

PENNSYLVANIA MEDICAL SOCIETY, Hershey, Pa, Nov 3-5, 1976. 20 Erford Rd, Lemoyne, Pa 17043.

PUERTO RICO MEDICAL ASSOCIATION, Santurce, PR, Nov 16-20, 1976. 1305 Fernandez Juncos Ave, Box 9387, Santurce, PR 00908.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov 28-Dec 3, 1976. 1 MONY Plaza, 15th Floor, Syracuse, NY 13202.

SOUTHERN MEDICAL ASSOCIATION, New Orleans, Nov 8-11, 1976. 2601 Highland Ave, Birmingham, Ala 35205.

■ TEXAS DISTRICT BRANCH, AMERICAN PSYCHIATRIC ASSOCIATION, El Paso/Juarez, Nov 12-14, 1976. Iris Wenzel, 1801 N Lamar, Austin 78701.

■ TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Nov. 6-7, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-9, 1976. 820 Davis St, Evanston, Ill 60201.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Atlanta, Dec 5-8, 1976. Charlotte Bruskin, Exec Sec, 40 Gramercy Park North, New York 10010.

AMERICAN MEDICAL ASSOCIATION, Philadelphia, Dec 4-8, 1976. 535 N Dearborn St, Chicago 60610.

AMERICAN SOCIETY OF HEMATOLOGY, Boston, Dec 3-5, 1976. Dr. Thomas Bradley, Sec, Veterans Administration Hospital, 4150 Clement St, San Francisco 94121.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nev, Dec 12-16, 1976. 1516 N Lake Shore Dr, Chicago 60610.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Puerto Vallarta, Mexico, Nov 10-13, 1976. Mrs. Virginia E Bryant, Exec Sec, 333 W Thomas Rd, Suite 207, Phoenix, Ariz 85013.

■ **SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 2-4, 1976. Dr. Reuben H Adams, Pres, 3630 Noble Ave, Dallas 75204.**

■ TEXAS ACADEMY CHAPTER, AMERICAN COLLEGE OF PHYSICIANS, Houston, Dec 2-3, 1976. Dr. RD Bone, Sec, Box 841, Corsicana, Tex 75110.

JANUARY, 1977

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Vail, Colo, Jan 6-8, 1977. 2650 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN HEART ASSOCIATION, ARIZONA AFFILIATE, Scottsdale, Ariz, Jan 21-22, 1977. 1445 E Thomas Rd, Phoenix, Ariz 85014.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Hollywood, Fla, Jan 30-Feb 5, 1977. Virginia Kendall, Sec, 30 N Michigan Ave, Chicago 60602.

AMERICAN SOCIETY OF CONTEMPORARY OPHTHALMOLOGY, Hollywood, Fla, Jan 30-Feb 5, 1977. Dr. John Bellows, Director, 6 N Michigan Ave, Suite 1110, Chicago 60602.

US VIRGIN ISLANDS MEDICAL SOCIETY, St. Croix, VI, Jan 13-15, 1977. Dr. James S Glenn, Chairman, US Virgin Islands Medical Society, Box 520, Christiansted, St. Croix, US Virgin Islands 00820.

FEBRUARY, 1977

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Las Vegas, Nev, Feb 3-8, 1977. Dr. Charles V Heck, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN COLLEGE OF CARDIOLOGY, Philadelphia, Feb 28-Mar 3, 1977. William D Nelligan, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF NUCLEAR PHYSICIANS, New Orleans, Feb 9-13, 1977. K Nicolas, 1730 Pennsylvania Ave NW, Suite 1150, Washington, DC 20006.

AMERICAN COLLEGE OF PSYCHIATRISTS, Atlanta, Feb 2-6, 1977. Dr. JC Nemiah, Beth Israel Hospital, 330 Brookline Ave, Boston 02215.

AMERICAN COUNCIL OF MEDICAL STAFFS, Washington, DC, February, 1977. Dr. JL Garcia-Oller, 3422 Bienville St, New Orleans 70119.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb 6-9, 1977. Dr. BF Alfano, Exec Sec, 675 Main St, Melrose, Mass 02176.

AMERICAN SOCIETY FOR SURGERY OF THE HAND, Las Vegas, Nev, Feb 1-3, 1977. Dr. JA Boswick, Jr, Sec, University of Colorado Medical Center, 4200 E 9th Ave, Denver 80220.

ASPEN RADIOLOGY CONFERENCE, Aspen, Colo, Feb 28-Mar 4, 1977. Dr. Emanuel Salzman, Conference Chairman, Division of Radiology, Beth Israel Hospital, Denver 80204.

FIRST DISTRICT MEDICAL SOCIETY, Pecos, Tex, Feb 7, 1977. Dr. LN Nickey, 1515 N Oregon St, El Paso, Tex 79902.

INTERNATIONAL ACADEMY OF PROCTOLOGY, Kuala Lumpur, Singapore, Bali, Hong Kong and Taipei, Feb 17-Mar 7, 1977. Dr. Alfred J Cantor, 96 Wildwood Rd, Great Neck, NY 11024.

TAOS MEDICAL SYMPOSIUM, Taos, NM, Feb 16-19, 1977. Thomas A Bodnar, Exec Dir, Albuquerque & Bernalillo County Medical Association, 2650 Yale Blvd SE #103, Albuquerque, NM 87106.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Corpus Christi, Feb 27-Mar 2, 1977. Robert E Monroe, Exec Sec, 4107 Medical Parkway #201, Austin 78756.

MARCH, 1977

AMERICAN ACADEMY OF ALLERGY, New York, Mar 26-31, 1977. DL McNeil, Exec Dir, 225 E Michigan St, Milwaukee 53202.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Durango, Colo, Mar 18-19, 1977. 2650 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN COLLEGE OF SURGEONS, Los Angeles, Mar 28-31, 1977. Dr. CR Hanlon, Dir, 55 E Erie St, Chicago 60611.

AMERICAN MEDICAL ASSOCIATION NATIONAL CONFERENCE ON RURAL HEALTH, Seattle, Mar 30-Apr 1, 1977. AMA Department of Rural and Community Health, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL STUDENT ASSOCIATION, Chicago, Mar 30-Apr 3, 1977. LR Giancola, Exec Dir, 1171 Tower Rd, Schaumburg, Ill 60195.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 28-31, 1977. 1430 Tulane Ave, New Orleans 70112.

■ SOCIETY OF NUCLEAR MEDICINE, SOUTHWEST CHAPTER, El Paso, Mar 18-20, 1977. Dr. RJ Gorten, 915 Strand, Galveston 77550.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Little Rock, Ark, Mar 16-18, 1977. Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

■ ST. LUKE'S EPISCOPAL HOSPITAL/BAYLOR COLLEGE OF MEDICINE, 13th Annual Orthopedic Symposium, Houston, Apr 1-2, 1977. Dr. Alexander E Brodsky, 505 Medical Towers Bldg, Houston 77025.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Houston, Mar 4-5, 1977. Iris Wenzel, 1801 N Lamar, Austin 78701.

■ TEXAS RADIOLOGICAL SOCIETY, Dallas, Mar 17-19, 1977. Iris Wenzel, 1801 N Lamar, Austin 78701.

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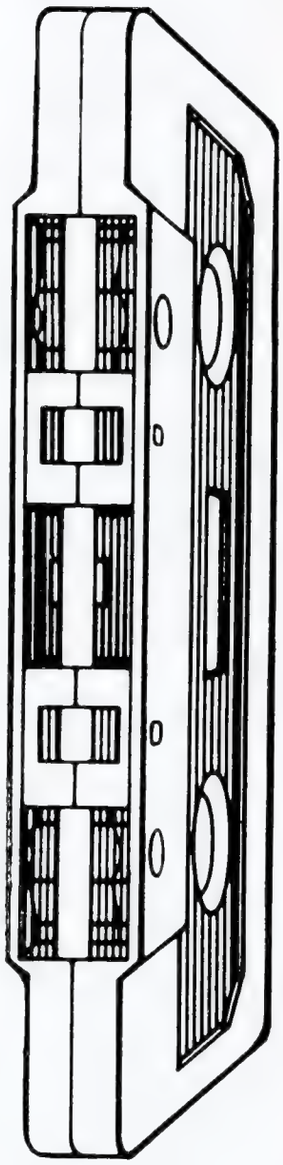

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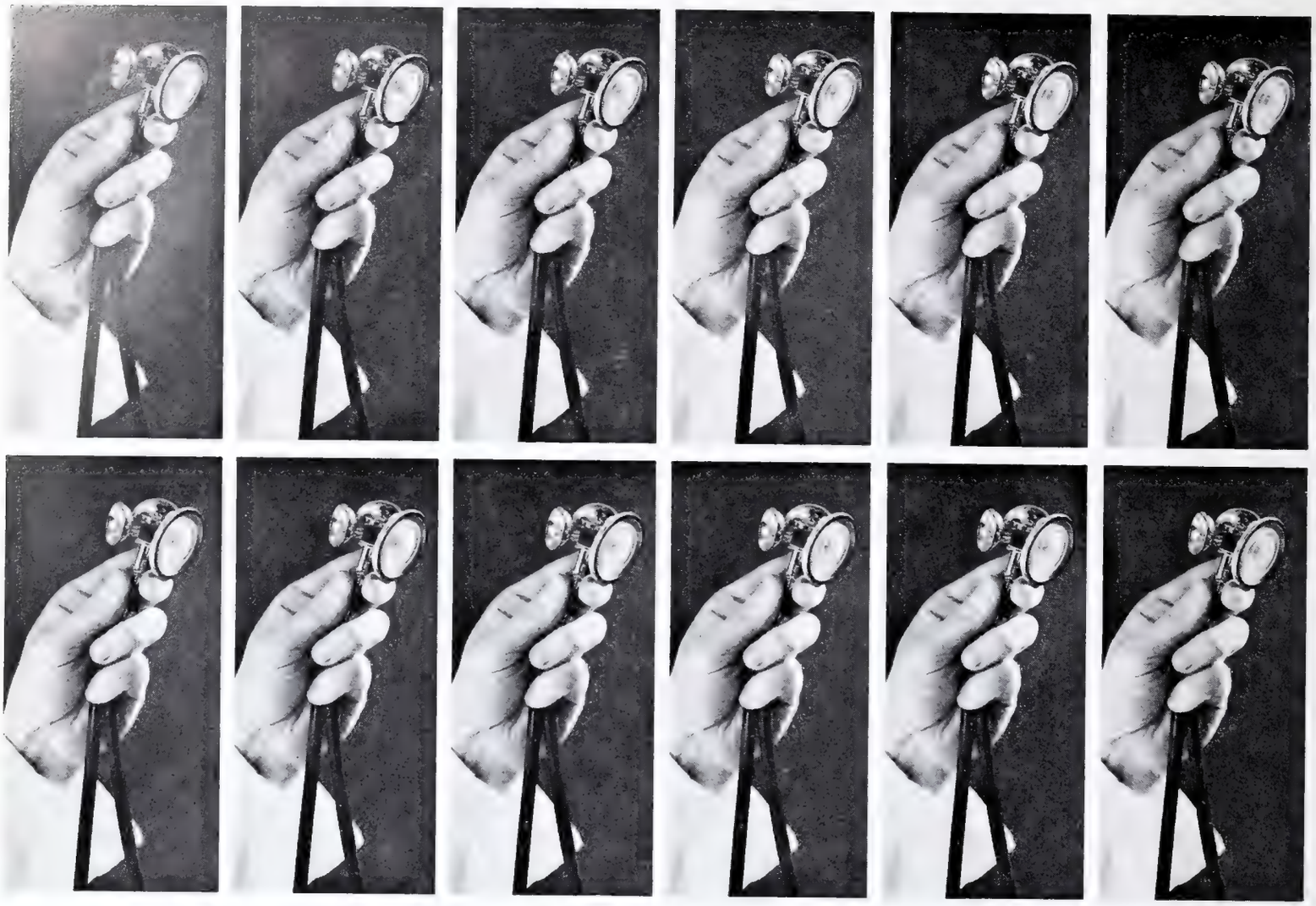

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CONTINUING EDUCATION COURSES

OCTOBER

Basic Sciences: Microbiology & Immunology

Title: Third Texas Medical Center Symposium on Infectious Disease and Microbiology
Sponsor: Office of Continuing Education, Baylor College of Medicine
Location of Course: Jesse Jones Auditorium, Houston
Date: Oct 21, 1976
Fee: $25 (Approximate)
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Title: Review of Clinical Microbiology
Sponsors: A Webb Roberts Center for Continuing Education; Department of Pathology, Baylor University Medical Center, Dallas
Location of Course: Sheraton-Dallas Hotel
Dates: Oct 4-8, 1976
Fee: $160
Credit: 32 hours, Category I, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Gastroenterology

Title: Refresher Course in Gastrointestinal Radiology
Sponsors: Department of Radiology, UT Health Science Center at Dallas; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: Fairmont Hotel, Dallas
Dates: Oct 22-24, 1976
Credit: 18 hours, Category I, AMA Physician's Recognition Award
Contact: Dr. Robert N Berk, Department of Radiology, Parkland Memorial Hospital, 5201 Harry Hines Blvd, Dallas 75235

Obstetrics & Gynecology

Title: What's New and Important in Ob-Gyn
Sponsors: Department of Obstetrics and Gynecology, UT Health Science Center at Dallas; A Webb Roberts Center for Continuing Education
Location of Course: UT Health Science Center at Dallas
Dates: Oct 12-16, 1976
Fee: $400 for complete course; $300 for basic course; $100 for pathology only
Credit: 35 hours, Category I, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Ophthalmology

Cancelled: Genetics in Ophthalmology Symposium, UT Medical School at Houston, Program in Ophthalmology, October, 1976

Psychiatry

Title: Film Festival: Culture in Psychiatry—Great Britain (Freedom and Responsibility)
Sponsor: UT Health Science Center at San Antonio
Location of Course: UT Health Science Center at San Antonio
Dates: Oct 22-24, 1976
Duration: Continuous, 3 days, 7 hours instruction per day
Fee: $10
Designed For: General practitioners; Specialists in Psychiatry
Credit: 20 hours, Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Paul Cutler, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Title: Psychiatry in Medical Practice
Sponsors: UT Health Science Center at Houston, Division of Continuing Education; UT Medical School at Houston
Location of Course: UT Health Science Center at Houston
Dates: Oct 27-Dec 15, 1976
Duration: Intermittent, 1 day per week, 8 weeks, 2 hours instruction per day, 14 total course hours
Fee: $50
Designed For: General practitioners
Enrollment: Maximum, 30
Credit: 14 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Grant Taylor, Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: Biofeedback for Technicians
Sponsor: UT Health Science Center, San Antonio
Location of Course: UT Health Science Center, San Antonio
Dates: Oct 7-8, 1976
Duration: Continuous, 2 days with optional third day
Fee: $200
Designed For: Specialists
Teaching Methods: Audiovisual materials, enrollee performs procedure, open question

Contact: Dr. Timothy Caris, Assoc Dean for Continuing Medical Education, 7703 Floyd Curl Dr, San Antonio 78284

Radiology & Radioisotopes

Title: Gastrointestinal Radiology
Sponsor: Department of Radiology, UT Health Science Center at Dallas
Location of Course: Fairmont Hotel, Dallas
Dates: Oct 22-24, 1976
Fee: $175; $75 for Residents and Fellows
Credit: 18 hours, Category I, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Other

Title: First Tarbox Parkinson's Disease Symposium
Sponsors: Texas Tech University School of Medicine; American Association of Neurological Surgeons
Location of Course: South Park Inn, Lubbock
Dates: Oct 14-16, 1976
Fee: $30 (includes one dinner and two luncheons)
Credit: 14 hours, Category I, AMA Physician's Recognition Award
Contact: Dr. Fathy S Messiha, Program Chairman, Tarbox Parkinson's Disease Symposium, Department of Pharmacology and Therapeutics, Texas Tech University School of Medicine, Lubbock 79409

NOVEMBER

Cardiovascular Disease

Title: Anesthesia and Surgery of Ischemic Heart Disease
Sponsor: Baylor College of Medicine
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Nov 18-19, 1976
Fee: $150 (approximate)
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Emergency Care

Title: 1976 Texas Emergency Medicine Symposium
Sponsors: Texas Chapter, American College of Emergency Physicians; Emergency Department Nurses Association
Location of Course: Sheraton Dallas
Dates: Nov 7-10, 1976
Contact: Dr. Leonard Riggs, Jr, 3500 Gaston, Suite 503, Dallas 75246

Endocrinology

Title: Diabetes Mellitus: Problem Areas
Sponsor: UT Health Science Center at Houston
Location of Course: Texas Medical Center, Houston
Dates: Nov 19-20, 1976
Contact: UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

Hematology

Title: Clinical Hematology
Sponsor: UT Health Science Center at San Antonio
Dates: Nov 20-21, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 10 total course hours
Fee: $75
Designed For: General practitioners; Specialists
Enrollment: Minimum, 25; Maximum, 50
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Contact: Dr.Timothy Caris, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Malignant Disease

Title: 21st Annual Clinical Conference: Current Concepts in the Management of Primary Bone and Soft Tissue Tumors
Sponsors: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston; UT Health Science Center at Houston, Division of Continuing Education; American Cancer Society, Texas Division
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Nov 11-12, 1976
Duration: Continuous, 2 days, 6 hours instruction per day, 13 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: 12 hours, AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel
Contact: Dr. George R Blumenschein, Assistant Director/Education, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, 6723 Bertner, Houston 77025

Title: Day in Pathology on Bone and Soft Tissue Tumors; Bone and Soft Tissue Seminar: Clinical and Pathological Correlation
Sponsors: Department of Pathology, UT System Cancer Center, MD Anderson Hospital and Tumor Institute; Texas Society of Pathologists
Location of Course: Shamrock Hilton Hotel, Houston
Date: Nov 13, 1976
Duration: Continuous, ½ day, 4 hours instruction
Fee: None
Designed For: General practitioners;

Specialists in Pathology, Orthopedics, Surgery, Radiology, Radiotherapy
Credit: 4 hours
Teaching Methods: Audiovisual materials, open question, panel, seminar
Contact: Dr. George R Blumenschein, Assistant Director/Education, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, 6723 Bertner, Houston 77025

Ophthalmology

Title: Symposium on Ophthalmology for the Non-Ophthalmologist
Sponsors: UT Medical School at Houston, Program in Ophthalmology; Texas Society for the Prevention of Blindness
Location of Course: Hermann Hospital Auditorium, Houston
Date: Nov 6, 1976
Duration: ½ day, 3 hours instruction
Fee: $15
Designed For: General practitioners
Credit: AAFP
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Dr. Richard S Ruiz, Director, Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77030

Title: Pediatric Ophthalmology for Non-Ophthalmologists
Sponsor: Baylor College of Medicine
Location of Course: Texas Children's Hospital Auditorium, Houston
Date: Nov 13, 1976
Fee: $50
Credit: 6 hours
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Radiology & Radioisotopes

Cancelled: Seminar with Specialists in Radiology, UT Health Science Center at San Antonio, Nov 10-12, 1976

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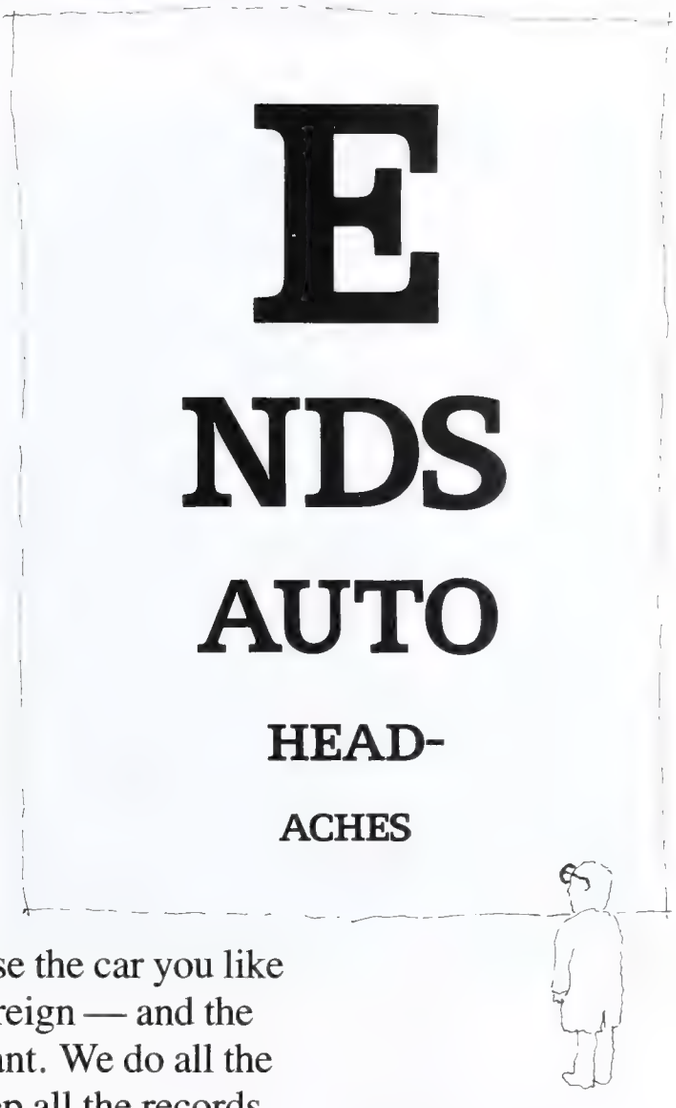

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Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequ and/or severity of grand mal seizures require increased dosage of standard convulsant medication; abrupt withdr may be associated with temporary in- crease in frequency and/or severity o seizures. Advise against simultaneou gestion of alcohol and other CNS dep sants. Withdrawal symptoms (similar those with barbiturates and alcohol) h occurred following abrupt discontinu (convulsions, tremor, abdominal and cle cramps, vomiting and sweating). addiction-prone individuals under ca

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Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

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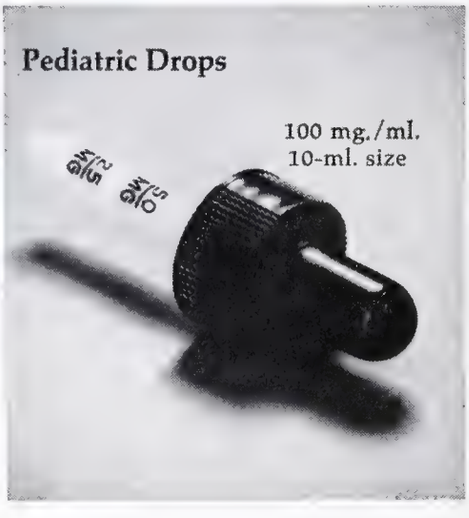

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Treatment of hypercalcemia

Murphy T. Scurry, MD

The recognition of hypercalcemia has become increasingly frequent with the use of multichannel analyzers. This fortuitous discovery of patients with significant hypercalcemia has reemphasized the difficulty in recognizing this electrolyte abnormality on the basis of symptoms and signs. The symptoms are nonspecific and primarily involve the gastrointestinal and central nervous systems. Anorexia, nausea, vomiting, and constipation may occur. Central nervous system effects may vary from somnolence and mild confusion to coma. Muscle weakness and polyuria may also be present. Some patients with serum calcium levels as high as 15 mg/100 ml may be asymptomatic. The physical signs of soft tissue calcification, most commonly seen in the cornea (band keratopathy) or the tympanic membrane, are usually not present. Shortening of Q-T or Q-oTc on the electrocardiogram may help point to hypercalcemia.

Severe hypercalcemia is a life-threatening situation and if untreated will lead to death from renal failure, cardiac arrest, or the complications of coma. A serum calcium level greater than 15 mg/100 ml requires vigorous and prompt treatment, and although values of less than 15 mg/100 ml also should be controlled, the situation is usually less acute. Most patients can tolerate serum calcium levels of less than 12.5 mg/100 ml without appreciable symptoms or danger for the time required for appropriate diagnostic studies. In patients with cancer, lower levels of serum calcium frequently produce significant symptoms.

The most specific measure in treating hypercalcemia is correction of the underlying cause. The list of causes of hypercalcemia is long but the majority of cases are the result of cancer and hyperparathyroidism. Appropriate surgical, radiation, and chemotherapeutic treatment may be effective in controlling hypercalcemia in patients with cancer. In some patients who are at the end stage of their disease, the use of the methods discussed herein for the temporary lowering of serum calcium levels may inappropriately prolong pain and suffering. Hyperparathyroidism is usually easily cured by surgical exploration of the neck with removal of parathyroid adenoma or hyperplastic glands.

Multiple medical measures are available for treatment of hypercalcemia. Some are more effective with hypercalcemia of certain causes, and some are more general measures applicable in all cases.

Mobilization

Immobilization may be a significant factor in the exacerbation of hypercalcemia. This is especially true in patients with diseases with high turnover of calcium in the bone such as Paget's disease and hyperthyroidism. In such patients, serum calcium levels may fall to normal or near normal just with the resumption of activity and weight bearing.

Hydration and Sodium

The restoration of fluid volumes to normal is the first and one of the most important steps to take in the treatment of hypercalcemia. It is essential also that sodium be given, because as the urinary sodium excretion increases, calcium excretion increases commensurately. Large amounts of sodium must be given (Fig 1), and in patients with borderline cardiac function or renal insufficiency, the danger of precipitating pulmonary edema is present. In such patients, it is wise to monitor central

venous pressure during the administration of the saline load.

Sodium sulfate is more effective than saline in increasing renal calcium excretion and has been used in the treatment of hypercalcemia.[1] An isotonic solution of 3.89% sodium sulfate decahydrate is given at a dosage not to exceed 3 liters/24 hours. Each liter contains 242 mEq of sodium, and hypernatremia has been reported as complication.

Diuretics

Furosemide increases both sodium and calcium excretion and has been an effective agent in lowering serum calcium levels.[2] Dosages of up to 100 mg given intravenously every two hours may be used, but lower dosages are usually effective. It is essential that urinary sodium and fluid losses be adequately replaced for this therapy to be effective. As considerable losses of potassium and magnesium occur, these cations must also be replaced. Ethacrynic acid has the same effect as furosemide but thiazide diuretics decrease urinary calcium excretion and are contraindicated.

Phosphate

Inorganic phosphate, given either orally or intravenously, has been most useful in controlling hypercalcemia.[3,4] There is danger of soft-tissue calcification, but phosphate is relatively safe when administered properly. One to 3 gm of elemental phosphorus per day is usually required. Oral phosphate preparations most commonly used are Neutra-Phos (250 mg of phosphorus per capsule) and Phospho-Soda (129 mg of phosphorus per ml). Diarrhea is the most common complication of oral phosphate administration, and it may require medication for control or may limit the use of phosphate in certain patients. Phosphate can be administered intravenously, but because of the complications of hypotension, renal failure, hypomagnesemia, and hypocalcemia that occur when phosphate is given too rapidly, this route of administration is reserved for the patient with severe hypercalcemia who is unable to take medication orally. The usual dose is 50 mM of phosphate given as an infusion over 6 to 8 hours.

Mithramycin

Mithramycin, an antitumor antibiotic which has been used primarily in the chemotherapy of testicular malignancies, is a potent hypocalcemic agent.[5] It acts directly on the bone, inhibiting bone resorption. The hypocalcemic effect after a single dose may persist for three to four days or for several weeks (Fig 2). The major limitation to its use has been the toxic effects to the bone marrow, liver, and kidney, with hemorrhage being the major complication. The recommended dose is 25 μg/kg body weight/day by slow intravenous infusion. It may be given intermittently if necessary. Serum calcium levels must be measured regularly, and hepatic, renal, and bone marrow function must be monitored as well.

Corticosteroids

Steroids have been widely used in the treatment of hypercalcemia and have been the most useful in lowering the serum calcium values in vitamin D intoxication, in multiple myeloma, and in granulomatous diseases such as sarcoidosis. They are ineffective in hyperparathyroidism. Although

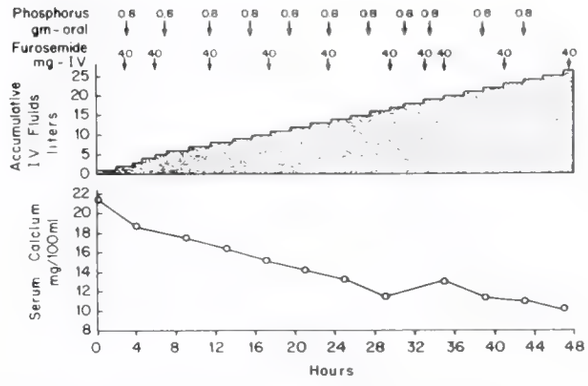
reported to control the hypercalcemia associated with cancer in more than half the cases,[6] steroids have been considerably less effective in my experience and in that of others.[7] The usual dosage is 60 to 80 mg of prednisone per day or its equivalent. Steroids may take days or weeks to control the serum calcium level adequately.

Calcitonin

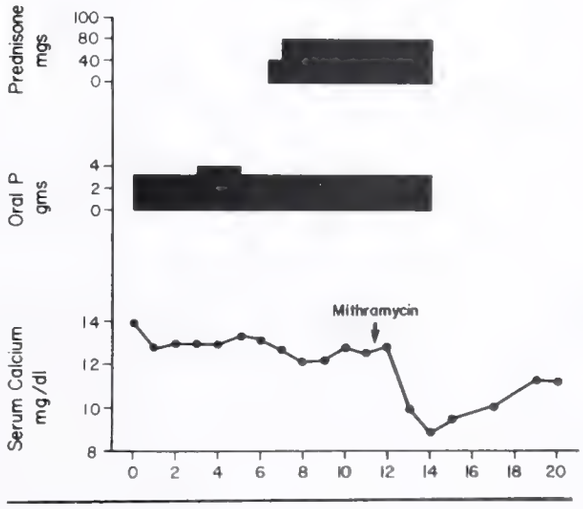
The polypeptide hormone, calcitonin, is an inhibitor of bone resorption. Several molecular varieties of calcitonin from different species have been investigated. Salmon calcitonin has been found to be the most biologically active preparation and is now available in a synthetic form. It has been approved for use only in Paget's disease, but it has been used with some success in the treatment of hypercalcemia.[8] In my experience the hormone has had limited usefulness, lowering the serum calcium value only 2 to 3 mg/100 ml when effective, and that effect may be transient. The usual dosage is 200 to 400 MRC units given intramuscularly every 6 to 12 hours. The major side effects have been nausea and vomiting.

Other Agents

A number of other treatments of hypercalcemia have been used and advocated. Agents such as sodium phytate and cellulose phosphate which bind calcium in the intestines and increase fecal calcium excretion have had some success but have never been widely evaluated.[9] Ethylenediamine tetracetate (EDTA) and citrate have not been used frequently because of the development of less toxic therapy. Dialysis has also been used. A report on the successful treatment of hypercalcemia with



1. Hypercalcemia in a patient with lymphosarcoma. Treatment with saline, furosemide, and oral phosphorus is depicted. Potassium and magnesium were also given.



2. Hypercalcemia in a patient with metastatic squamous cell carcinoma. Treatment with saline in addition to the prednisone and oral phosphorus (P) is depicted, mithramycin (25 μg/kg body weight) was given intravenously at the time indicated.

indomethacin in a patient with renal-cell adenocarcinoma[10] is especially interesting in relation to the previously postulated role of prostaglandins as a cause of hypercalcemia associated with some neoplastic diseases. Gamma globulin has also been reported to control hypercalcemia in more than 60% of 16 cancer patients.[11] The mechanism of action is not clear, but this form of therapy may have wider application after it has been more extensively evaluated.

General Approach

With all the agents available, how does one treat the usual patient with severe hypercalcemia? First, fluid volumes must be restored and then large amounts of saline are administered with the concomitant use of furosemide or ethacrynic acid. The amount of fluid and salt given depends upon the cardiovascular and renal status of the patient. If the patient is able to take medication by mouth, phosphates are given orally. If saline and diuretics are not successful and phosphates cannot be taken orally, then intravenous administration of phosphate or mithramycin is practically always successful.

This comprehensive review article was prepared for *Texas Medicine* through the cooperation of Edward N. Brandt, MD, Dean, and Michael M. Warren, MD, Chairman, Continuing Education Committee, The University of Texas Medical Branch, Galveston.

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Dr. Scurry, Department of Medicine, The University of Texas Medical Branch, Galveston, TX 77550.

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Sudden death syndrome

Robert N. Barnes, MD; Jack M. Martt, MD

Sudden death has always been a subject of great interest to physicians, especially when postmortem studies fail to reveal any cause of death. This article reviews some of the statistics concerning sudden death and the risk factors associated with sudden death, including exercise and emotions. (Can emotions cause sudden death in a normal person?) It also briefly discusses some conditions, other than ischemic heart disease, that are associated with sudden death.

Sudden death is defined as unexpected natural death occurring within one hour of the onset of illness. It has been estimated that 15% of all natural deaths occur unexpectedly and suddenly. Sudden death is twice as frequent in males as it is in females. The frequency shows two age-related peaks: between birth and 6 months and between 35 and 70 years. Presumably, after age 65 years there is a progressive decline in the frequency of sudden unexpected death. However, no age group is immune from sudden death.

Instantaneous death is almost always a result of a disturbance of the cardiac mechanism, either ventricular fibrillation or asystole. The statistics vary slightly, but basically they agree: 80 to 90% of sudden deaths are cardiac; and 90% of cardiac sudden deaths are due to ischemic heart disease. This latter value is probably somewhat high because there is a tendency to attribute all sudden deaths to coronary artery disease; however, there are other causes. Sudden death is a presenting manifestation in 25 to 30% of new attacks of ischemic heart disease. A retrospective study[1] of 1,348 sudden deaths revealed that 74% of the victims had had no known coronary artery disease and 41% had had no symptoms suggestive of coronary artery disease (at least they had not mentioned such symptoms to their relatives). Only 10% of sudden deaths occur in the hospital; 90% occur away from the hospital and away from the physician. These facts point out the tremendous need for better early diagnosis of coronary artery disease.

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Risk Factors

How might we identify some of these persons who are prone to sudden death? In general, the same factors associated with an increased risk of coronary artery disease are associated with an increased risk of sudden death. However, although there is a tremendous overlap, there are some differences. We should probably think of risk factors as risk factors for angina or coronary atherosclerosis, risk factors for myocardial infarctions, and risk factors for sudden death.

For example, obesity is more commonly associated with sudden death than with myocardial infarction; hypercholesteremia is more commonly associated with atherosclerosis than with sudden death. However, the degree of systolic hypertension is definitely correlated with sudden death, at least in the Framingham and Albany studies.[2] Also, the amount of overweight is distinctly related to the risk of sudden death (the risk is increased in grossly obese men). Sudden death is definitely related to cigarette smoking in the Framingham and Albany studies (sudden death is uncommon in non-cigarette-smokers, and smokers have a threefold higher risk of sudden unexpected death than do non-cigarette-smokers).

If there is electrocardiographic evidence of left ventricular hypertrophy, there is a fivefold increase in risk of sudden death. Premature ventricular contractions are associated with an increased risk when there is heart disease or when there is an electrocardiographic abnormality such as left ventricular hypertrophy. The more sedentary male has a twofold greater risk of sudden death compared to the active male. In the Baltimore study,[3] women who died suddenly were more frequently unmarried and were usually heavy cigarette smokers (the significance of being unmarried is not known unless this means that these persons have a different type of life style).

The majority of persons dying of coronary artery disease have identifiable risk factors. It is reasonable that modification of these factors might delay or even prevent sudden death. We spend much of our time treating hospitalized patients who have far-advanced coronary artery disease but do little, almost nothing, for the 30% of persons with new attacks of ischemic heart disease who are going to die suddenly outside the hospital and away from medical care.

Emotional Stress as a Risk Factor

Sudden death due to emotional stress has been of interest for thousands of years. We know that persons with heart disease probably can be stressed sufficiently to cause arrythmias. The question arises, "Can a normal person die of emotional stress?"

Burrell[4] described more than 200 instances of sudden death in Transvaal (a province in northern South Africa) after a curse had been placed on the individual —a so-called voodoo death. Autopsies were performed in all of these 200 cases and no abnormality was found. In Wales, there is a legend that, if anyone sees his double, he will drop dead, and reports from Wales have described deaths presumably caused by the belief in that legend.

Engel[5] described 170 examples of sudden death due to emotional stress. The settings associated with sudden death in these cases included the collapse or death of a close person in 36 cases, periods of acute grief in 35 cases, threat of loss of a close person in 16 cases, during mourning or an anniversary in 5 cases, loss of status or self-esteem in 10 cases, and personal danger in 46 cases.

Walters[6] reported an interesting case of a woman who was convinced she was going to die on her 42nd birthday which also was the anniversary of her mother's and aunt's deaths, also in their 42nd year. As she approached the date, she became terrified and her physician could not reassure her. She collapsed on the very date that her mother and aunt had died and she died the following day, presumably of arrhythmia because no abnormality was found. In addition, there are examples of terrified persons dying before minor operations or dying in the dentist's chair. Most of them presumably die of arrhythmias.

Some stress situations involve rapid shifts between sympathetic and parasympathetic cardiovascular effects. This would indicate a shift from the so-called fight pattern to the so-called withdrawal pattern. Tachycardia may suddenly shift to bradycardia. Rats under stress often demonstrate parasympathetic influences leading to their death.

It is well known that inhibitory pheno-

mena associated with slow heart rates may be prone to reentrant ectopic activity and then to ventricular fibrillation, Also, asystole can result from a hyperactive carotid sinus. Prolonged QT intervals, premature ventricular contractions, and ventricular fibrillation have been provoked experimentally in animals by stimulation of the central nervous system. Corley and associates[7] stressed squirrel monkeys by an aversion technique and were able to cause ST depression and bradycardia progressing to the point of ventricular arrest and death in these supposedly healthy monkeys.

As long ago as 1915, Albutt, who introduced the clinical thermometer, postulated that death could result from overwhelming sudden vagal stimulation. This would cause cardiac standstill. He was scoffed at until Sir Thomas Lewis coined the term "vasovagal" to describe syncope due to parasympathetic stimulation. All doubt regarding vagal inhibition and its importance was removed when, in 1934, Heymans and Bouckaert described the physiology of the carotid sinus and the aortic and cartotid bodies.

It is known that a striking bradycardia can occur in a healthy young adult when his or her face is immersed in cold water —the diving reflex. Wolf[8] believes that a similar bradycardia may occur under circumstances of extreme dejection or sudden fright and can cause death. He tested tense medical students by performing arterial punctures on them and found that they could produce changes compatible with the diving reflex: bradycardia, decreased blood flow to the skin and viscera, increased arterial pressure, and metabolic changes such as decrease in blood pH and increase in lactic acid, carbon dioxide, and potassium levels.

The diving reflex can be adapted. Supposedly, yogis can slow their heart rate so that they can be immersed in water, in coffins, for as long as an hour or two at a time.

Exercise as a Risk Factor

Carruthers and coworkers[9] have suggested that exercise is the measure of choice for preventing coronary artery disease. However, there is a risk associated with exercise. The risk of ventricular fibrillation may be as high as two episodes for each 1,000 hours of physical activity in a population predisposed to coronary artery disease.

Newspaper reports in Ontario suggest an incidence of one attack of ventricular fibrillation for each 2,500 gymnasium hours in normal middle-aged men. Cobb[10] also reported that the risk of sudden death is high in the gymnasium, and many such deaths have occured in Seattle. Friedman and others[11] found that half of those persons dying within 30 seconds of the onset of symptoms did so immediately after severe or moderately severe activity, and the probable cause was an arrhythmia.

Opie[12] studied sudden death during sports activities, mostly in rugby players, in an attempt to uncover some of the factors associated with these sudden deaths. Smoking was a definite factor. Of the 19 sudden deaths during sports activity, 11 were in heavy smokers (more than 1 pack/day), 2 in moderate smokers, 3 in nonsmokers, and 3 in persons whose smoking history was not known. Four victims had primary relatives who had had a heart attack before age 45 years, and three had a family history of angina. Lipid disorders were not well correlated: definite in only three and probable in three. Hypertension is hard to evaluate because most of the

victims had never had their blood pressure measured as far as could be determined. However, there was a high incidence of previous angina or heart attacks in these persons who died while engaged in sports activity. In regard to fitness, 11 victims were classified as follows: unfit, 4; fit, 3; and very fit, 4. Three were obese.

We might be able to postulate a biochemical mechanism for death after exercise. After exercise, the concentration of free fatty acids in the blood increases more in unfit than in fit persons. Free fatty acid, a nonesterified fat, is a major source of fuel for the heart. Very high free fatty acid concentrations may be one of several factors contributing to the development of arrhythmias and arterial thrombosis. Furthermore, blood catecholamine levels are increased by exercise. The combination of increased catecholamines and increased free fatty acids may be associated with a higher incidence of arrhythmias. Also, smoking increases free fatty acids and increases catecholamines. It would seem, then, that smoking during or immediately after exercise will particularly cause an increase in the free fatty acids and catecholamines, and this increase could be associated with an increased incidence of arrhythmias.

If this is true, then it would seem that smoking is an important risk factor for sudden death in sportsmen, who have an increased risk of sudden death.

Anyone over 30 years of age who plans to embark on heavy physical activity or an activity such as jogging should have a cardiac evaluation. This should probably include exercise testing if there is a family history of coronary artery disease, if the person has had chest pain, or if the person is a smoker.

Conditions Other Than Ischemic Heart Disease

Although coronary artery disease is the leading cause of sudden death, no one would deny that other cardiac conditions also are associated with sudden death. Sudden death is common with aortic stenosis. Perhaps less well known is that 10% of those persons with aortic insufficiency die suddenly and unexpectedly.

Another condition is myocarditis. The incidence of sudden death from myocarditis probably is higher than death certificates would lead us to believe because most of these deaths are attributed to ischemic heart disease.

A pregnant woman with primary pulmonary hypertension has a 53% risk of dying suddenly during pregnancy or in the immediate postpartum period. Also, pregnant women with Eisenmenger complex, especially if the pulmonary hypertension is severe, have a high risk of sudden death.

The Jervell and Lange-Nielsen syndrome, the mitral valve prolapse click syndrome, idiopathic hypertrophic subaortic stenosis, and some congenital heart diseases carry a definite risk of sudden death.

In 1957, Lange-Nielsen and Jervell described the syndrome characterized by a prolonged QT interval; these patients also may be deaf.[13] They have ventricular arrhythmias and a propensity to sudden death. The condition is inherited as an autosomal dominant; the deafness is inherited independently as an autosomal recessive. The blood vessels supplying the atrioventricular and sinus nodes are often abnormal. All children who have inherited deafness should have an ECG. Also, children with unexplained syncope should

have an ECG. If the condition is strongly suspected, it would be wise to do an exercise test on these children because the QT interval abnormality may be present in some individuals only during exercise. If this condition is diagnosed, the family should be trained in cardiopulmonary resuscitation because the risk of death is extremely high. Persons with this syndrome should be monitored during any surgical procedure, even dental extractions. Usually, as these persons get older, particularly after age 30 years if they live that long, there is a decrease in the incidence of sudden death.

A much more common condition is Barlow's syndrome, also known as midsystolic click, late systolic murmur syndrome, or mitral valve prolapse syndrome. A study at Stanford University School of Medicine revealed that 5% of apparently normal, healthy, college-age women have a midsystolic click. The potentially malignant nature of it, at least in some persons, is becoming increasingly apparent. This condition may be familiar and there can be a history of sudden death throughout the family tree. In one study[14] of 24 patients with the syndrome, 50% had arrhythmias on resting ECGs and 75% had arrhythmias with exercising testing.

An interesting case[15] was reported from the University of Oklahoma in which a 27-year-old woman collapsed during an egg-rolling contest at a picnic. A physician was present and started cardiopulmonary resuscitation. She was taken to the emergency room where she was found to have ventricular fibrillation and was defibrillated successfully. Mitral valve prolapse was diagnosed, and a prolonged QT interval also was present (as may be seen occasionally with mitral valve prolapse syndrome). During initial treatment with diphenylhydantoin (Dilantin), which will decrease the QT interval in many cases, she still had episodes of syncope. She was then placed on a regimen of propranolol, 80 mg/day. During follow-up observation it was thought that the episodes of syncope and ventricular fibrillation had been abolished. However, one day she began arguing with a furniture store clerk and collapsed. No one present knew how to resuscitate her and she died. At autopsy, both mitral leaflets were thickened and redundant and there was a myxomatous amorphous material scattered throughout the heart valves and the papillary muscles and in the collagenous and elastic fibers. This case demonstrates the extreme difficulty of preventing sudden death in persons with this syndrome.

We would emphasize that, of the large number of persons with a midsystolic click, less than 1% are at risk of sudden death. Further studies are needed to determine the characteristics of those who would benefit from prophylactic antiarrhythmia therapy.

Another condition that carries a definite risk of death is idiopathic hypertrophic subaortic stenosis (IHSS). A study[16] from London's Hammersmith Hospital and the Royal Postgraduate School of Medicine revealed that in 119 cases, sudden death was the leading mode of death in persons with this syndrome (19 of 30 deaths). Interestingly, 13 of the 19 patients who died suddenly were taking beta-adrenergic blocking agents at the time of their death (the daily dose usually was less than 100 mg and most commonly was 80 mg). Two of the sudden deaths occurred in patients who had had apparently successful surgery. Ventricular fibrillation was demonstrated in two of the patients but presumably was present in most or all of them.

The duration of symptoms before death with IHSS was 8.6 years. Other studies have produced similar results, but in the English study there was a higher incidence of sudden death in males while the other studies showed no sex difference.

A recent report[17] showed that IHSS may be a cause of sudden death in infants.

An editorial[18] in the *British Medical Journal* reported details of 254 sudden deaths in children more than 1 year old. Half of all sudden deaths in these children were associated with ventricular outflow obstruction. The four most common causes of death could be separated into those associated with left ventricular obstruction (aortic stenosis in 17% of deaths and hypertrophic obstructive cardiomyopathy, the English term for IHSS, in 9%) and right ventricular obstruction (Eisenmenger complex in 16% and pulmonary stenosis, including tetralogy of Fallot, in 14%). The risk of death from left ventricular outflow obstruction is particularly high during sports. IHSS resulted in 17 deaths, of which 5 were sudden deaths. Sudden death is unusual in children with mild heart disease. But death during physical activity is a real hazard in any child with severe obstruction of left ventricular outflow (IHSS or severe aortic stenosis with marked left ventricular hypertrophy). Apparently, mild aortic stenosis does not carry risk of sudden death in children.

Recently, seven deaths were reported[19] due to abnormalities of the origin of the coronary arteries. The left coronary artery arose from the anterior sinus of Valsalva, and the right coronary artery arose from the noncoronary sinus of Valsalva. The problem with this arrangement is that, as the left coronary artery courses between the aorta and the pulmonary artery, it becomes stressed and the ostium can be closed down to a slit-like opening. During exercise, the torsion is particularly severe, and the artery may close off completely; sudden death has occurred. Spain[20] suggested that most sudden deaths in young persons are due to abnormalities of the coronary arteries (this is doubtful because of the other conditions mentioned). There have been reports of both coronary arteries arising from the anterior sinus of Valsalva.

Sudden death has been reported almost every fall during football season, usually among high-school players. Besides heat stroke, the most common causes of these sudden deaths probably are abnormalities of the coronary arteries, IHSS, and a congenital defect of the conducting system such as Refsum's disease (persons with this autosomal recessive inherited syndrome can develop complete heart block and die). Now that females are becoming more involved in sports, we will probably have more sudden deaths in females from the prolapsed mitral valve syndrome.

Exposure to Fluorocarbons as a Risk Factor

Fluorocarbons are the propellants used for almost everything sprayed out of a can. Even some asthma nebulizers have fluorocarbons in them. These are cardiac toxins. The initial idea that fluorocarbons are inert gases is no longer valid. For example, in the mouse, during 15 seconds of asphyxia after inhalation of propellant, there was sino-atrial slowing, PR interval prolongation, T wave depression, and development of 2:1 block. Also, in beagles stressed on the treadmill, inhalation of one of these fluorocarbons can induce heart block, asystole, and death. Deaths have been reported as a consequence of

spraying fluorocarbon propellant into a plastic or paper bag and then inhaling it from the bag. It is not likely that spraying the fluorocarbon from an entire can into a room will give a high enough concentration to cause death. But it is not known if there is an additive effect that might, over years of use, cause cardiac toxicity. The fluorocarbons in the nebulizers that asthmatics use can be a definite toxin and it has been suggested[21] that the epidemic of asthma deaths that occurred in England from 1960 to 1967 might have been caused by sensitization of the heart to cardiac arrhythmias by the fluorocarbons used to propel bronchodilator aerosols.

Resuscitation

In the Seattle study by Schaffer and Cobb,[22] 234 victims who went into ventricular fibrillation outside of the hospital were successfully resuscitated and dismissed from the hospital, and one had three episodes of ventricular fibrillation outside the hospital and survived. The ambulance drivers in Seattle have 81 hours of intensive education on resuscitation and other life-saving measures; 80,000 persons in Seattle have had a three-hour course in cardiopulmonary resuscitation. Some of the facts from Schaffer and Cobb's work are that sudden death outside the hospital is the fate of more than half the people who die of ischemic heart disease, that sudden apparent death is a separate and distinguishable syndrome from myocardial infarction, and that sudden apparent death need not be lethal.

Prevention and Treatment

In 1976, approximately 28,000 Texans will die of ischemic heart disease; 65% of these deaths will be sudden and unexpected. This is many more than the number of patients dying of carcinoma. This is our major public health problem. How are we to deal with it?

Certainly one of the most dramatic and aggressive approaches to the problem is that attempted in the city of Seattle. Would that every community in America could emulate the track record of this city of 500,000 people. There, any victim of sudden apparent death, anywhere in the city of Seattle, can be reached within three minutes. This is a laudable achievement because theoretically one has but four minutes from onset of apparent death until irreparable brain damage occurs. In Seattle, they have been able to resuscitate about 45% of the victims that they encounter at the scene and, ultimately, 25% leave the hospital alive.

However, not every community in America can hope to achieve those standards. Sometimes just the geography of the area prevents it. Houston probably leads in Texas as far as speed of help arriving at the scene of sudden apparent death and instituting appropriate resuscitative measures.

What other approaches might be available?

We are woefully neglecting the identification of the individual who might be prone to sudden death. We have to look for the risk factors of ischemic heart disease.

Checking the cord blood of all newborn infants for hyperlipoproteinemia is the simple, inexpensive procedure that could be done routinely and might provide early identification of persons at high risk.

Medications represent another possible approach. Several studies suggest

that some drugs can be helpful in the high-risk individual—for example, the patient who has recovered from a myocardial infarction and now has premature ventricular contractions. In England, a controlled study[23] of postmyocardial infarction patients treated with the beta-adrenergic blocker, alprenolol, revealed the mortality rate from sudden death to be 3.8% in the group receiving the beta blocker, and 10.1% in those receiving placebo ($P<0.05$) after two years. Thus, the use of beta-adrenergic blockers after myocardial infarction might significantly decrease the risk of sudden death.

Reports from abroad suggest that diphenylhydantoin may have a beneficial or protective effect, but there have been no controlled studies. One other drug, mehexiline, shows promise and may be released for use in the United States soon. Chemically, mehexiline is similar to lidocaine and can be taken orally or given intravenously. It has a potent antiarrhythmic effect on the heart and may be a pharmacologic breakthrough in dealing with the difficult problems of cardiac arrhythmias.

Does the surgeon have anything to offer? Two independent studies in California have shown that there is a decrease in incidence of sudden death in patients after saphenous vein bypass grafts to the coronary arteries as compared to patients treated medically. In other words, the increased longevity now being demonstrated in patients who undergo successful saphenous vein bypass grafting of the coronary arteries for ischemic heart disease may be due to the decrease in the incidence of sudden death rather than to decrease in recurrent myocardial infarction.

Funds are needed to implement more emergency resuscitative teams throughout the country. This is a costly proposition, and yet the amount of money devoted to this problem by the National Institutes of Health is minuscule compared to the funds going for cancer research. Cancer research is important, but proper perspective should be maintained. We need money (1) to allow communities to provide emergency medical care such as Seattle and Houston have done, (2) to promote large search programs to identify those persons who are at high risk, and (3) to support research aimed at understanding the electrical instability of the heart that leads to sudden death and for the development of better drugs to prevent cardiac arrhythmias.

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Dr. Barnes, Veterans Administration Center, Temple, TX 76501.

Dr. Martt, Scott and White Clinic, Temple, TX 76501.

Reprint requests to Dr. Martt.

Incidence of sudden infant death syndrome in Texas, 1969–1972; estimation by the surrogate method

Ruth Maxwell, BS, MPH; Lewis H. Roht, MD, MPH; Paul Callen, BS

The sudden infant death syndrome (SIDS) is the leading cause of infant death after the newborn period. This article reviews the epidemiology of SIDS and focuses on recent pathophysiologic findings related to the disease etiology and potential mechanism of death. Estimates of the incidence of SIDS by race, sex, public health region, and Standard Metropolitan Statistical Areas in Texas were prepared using the surrogate method.This method permits estimates of the incidence of SIDS based upon the pattern of deaths among infants 1-4 months old. Estimates were prepared from Texas mortality records, 1969-1972.

The occurrence of sudden infant death is one of the most traumatic clinical events that a family may ever experience. The unexpected and inexplicable nature of this tragedy induces feelings of guilt and blame between the parents and poses difficult problems for the attending physician. The fact that sudden infant death is the leading cause of infant mortality after the first week of life and is estimated to cause 10,000 infant deaths per year[3] in the United States establishes it as an important pediatric and public health problem.

This article briefly reviews the epidemiology of the sudden infant death syndrome (SIDS) and presents estimates of its incidence in Texas between 1969-1972.

SIDS is defined as "the sudden death of any infant or young child, which is unexpected by history, and in which a thorough postmortem examination fails to demonstrate an adequate cause for death."[2] While termed a "syndrome," it is not known if SIDS comprises one or a group of diseases whose shared characteristic is the manner of death.

The diagnosis of SIDS is made by exclusion of other possible causes of death. Of all cases of sudden or unexpected infant death, approximately 15% can be explained through autopsy findings. The remaining 85% do not reveal any significant postmortem findings and are designated as SIDS.[1,3] While gross pathological findings are insufficient to explain the cause of death, SIDS victims show many similarities at autopsy:[2,5] (1) normal physical development and nutrition; (2) moderate cyanosis with maximal expansion of the lungs, and minimal to moderate degree of pulmonary congestion and edema; some agonal aspiration of vomitus may be present; (3) intrathoracic petechiae present on the surface of the lungs, thymus, and pericardium; (4) small, thin, and flat adrenals which show no sign of stress; and (5) mild to moderate inflammation of the upper respiratory tract in half of the cases.

The incidence of SIDS is quite similar in most western countries, ranging from 2 to 3 per 1,000 live births. The lowest rates are reported by Israel and the Scandinavian countries, 0.3 deaths per 1,000 live births. No data are available from developing nations.[6]

Although sudden unexplained deaths are reported up to 2 years of age, about 90% of cases occur between 1 and 6 months of age, with more than half of the cases within the first 3 months of age.[3] This peculiar age distribution of deaths differs from other causes of infant mortality.[7] There is general agreement that SIDS shows seasonal fluctuations[1,2,7] with more deaths occurring during the colder winter months,[3-5,8] although the mechanism is not clear. Investigation of ambient temperature, wind velocity,and air polluted by sulfur dioxide have not shown an independent association with SIDS.[9]

Low infant birth weight has been shown to be associated with SIDS.[1,3,4,7] Prema-

tures and infants of multiple birth have a higher SIDS rate and there is a clear decline in risk as birth weight increases.[1,10] The SIDS rate was almost ten times greater in babies whose birth weight was 3.5-4.0 pounds compared to those who weighed 7.5 and 8.5 pounds,[1] while twins had threefold and triplets sixfold excess risk compared to infants of single live births.[7] It is thought that environmental factors are important in the etiology of SIDS since the age at death is similar in prematures and term infants.[3,4,7] Males are known to be at higher risk than females.[2,4] This probably reflects the excess mortality of males at all ages rather than a genetic risk inherent to being male.[4]

Several studies indicate that socioeconomic status and risk of SIDS are associated because a higher incidence occurs in low-income families.[4,7,15] Since blacks, Mexican-Americans and American Indians have a large proportion of their respective groups in the lower socioeconomic categories, they also have higher SIDS rates, 2.92 vs 1.74 vs 5.93/1,000 live births, respectively, compared to 1.32/1,000 live births in whites.[7] Strimer and associates[12] found, however, that racial differences in

1. Theories of causes of SIDS.[3]

A. Extrinsic
1. Infanticide
2. Suffocation
3. Spinal epidural hemorrhage
4. Aspiration of gastric contents
5. Climatic changes
6. Hypothermia
7. Exogenous hyperthermia

B. Nutritional and Metabolic
1. Rickets
2. Selenium, vitamin E deficiency
3. Scurvy
4. Renal dysfunction
5. Magnesium deficiency
6. Hypocalcemia
7. Vitamin D deficiency
8. Acidosis
9. Hypokalemia
10. Subclinical aminoacidopathy, protein overload

C. Endocrine
1. Adrenal insufficiency
2. Parathyroid insufficiency

D. Anatomical
1. Conduction system abnormality
2. Cartilage in conduction system
3. Aspiration of malformed uvula
4. Aspiration of edmatous uvula
5. Collapse of trachea
6. Postinfectious dislocation of atlas
7. Enlarged thymus
8. Choanal atresia
9. Positional narrowing of airway

E. Immunologic
1. Anaphylaxis to intrauterine infection
2. Anaphylaxis to cow's milk
3. Immune complex disease
4. Reaction to immunization
5. Hyperimmunization, "anti-antibody"
6. Anaphylaxis to nucleoprotein
7. Hypogammaglobulinemia
8. Anaphylaxis to house dust mites

F. Infectious
1. Streptococcal sepsis
2. Bacterial sepsis
3. Combined bacterial and viral infections
4. Coliform enteritis—endotoxemia
5. Staphylococcal enteritis
6. Bacterial pneumonia
7. Otitis media
8. Laryngotracheobronchitis
9. Bronchiolitis
10. Desquamative pneumonia
11. Interstitial pneumonitis
12. Virus infections
13. Cytomegalovirus infection

G. Neurologic
1. Diving reflex
2. Hypersensitive carotid sinus
3. Palato-glossal reflex
4. Arrhythmia due to autonomic immaturity
5. Diving reflex or laryngospasm due to aspiration of saliva
6. Apneic spells
7. Laryngospasm
8. Vasovagal reflex
9. Cervical cord lesion—"Ondine's curse"

H. Miscellaneous
1. Cerebral "red substance"
2. Nasal obstruction
3. Fibrinoid laryngeal necrosis
4. Hyperpyrexia
5. Pulmonary thrombosis
6. Cerebral edema
7. Deranged eosinophile function
8. Chromosomal abnormalities
9. Maternal methadone addiction
10. Toxic follicle reaction
11. Vascular injury
12. Myeloid leukemia
13. Myocardial electrolyte disturbance
14. Genetic cardiac conduction defect
15. Pulmonary surfactant deficiency

sudden infant deaths disappear within each economic grouping, supporting the notion that differences in incidence are largely a function of the economic status of the racial groups. Socioeconomic status may account for much of the association between low birth weight and SIDS, since low income is correlated with increased risk of premature birth.[3]

Maternal factors have shown a correlation with SIDS. Mothers of SIDS babies tend to be young, many under age 20, with a tendency to higher parity than mothers of non-SIDS babies.[7] Also, mothers who received early prenatal care are at less risk of having a SIDS baby (1.04/1,000 live births) compared to mothers who initiate prenatal care late in pregnancy (3.57/1,000 live births) or those having no prenatal care at all (4.4/1,000 live births).[7,29] The reasons for these associations are not yet clear.[4]

Approximately 2% of families who lose one infant to SIDS will lose a second, which is four to seven times greater incidence than the random risk of an SIDS death in the general population.[4] This risk is smaller than expected if the disease trait was inherited in accord with mendelian principles, and SIDS therefore is not primarily a genetic disorder.[3,4,14] Although it is possible that genetic factors may be causally related to the increased risk in certain families, current knowledge and research methods are not sensitive enough to discern the ways in which genetic and environmental factors may interact in the etiology of SIDS. Although second SIDS events have been observed in the same family, investigations have not revealed a tendency for SIDS to cluster either in time or space, as is seen in epidemics of infectious diseases.[4]

Unlike other fatal events in infants, SIDS deaths occur mostly at night[2,15] and are related to sleep, prompting the term "crib death." Although many victims experienced an upper respiratory infection several days earlier, almost all were apparently in good health at the time of death. Death occurs silently with no outcry being heard, although the peculiar positions in which many victims are found suggests that there may be vigorous activity prior to death.[3]

A great many theories have attempted to explain the etiology and mechanism of SIDS. Fig 1 lists hypotheses which have been suggested.[3] While earlier attempts to show an infectious disease etiology were unsuccessful, recent studies support the notion that viral agents may play a role in the pathogenesis.[1,18] The manner is not yet clear since a variety of agents rather than a single organism have been implicated.[16]

Two theories are currently prominent. James[19] observed histologic variation in the bundle of His and the atrioventricular node of SIDS victims, and has suggested that these might initiate fatal cardiac arrhythmias. However, Valdez-Dapena was unable to replicate this finding, and suggested that the histologic findings depend upon subjective interpretation.[20] Recently, Maron and others[21] determined that parents of SIDS victims had prolonged QT intervals on electrocardiographic tracings, and a substantial proportion (40%) of the SIDS victims had a similar ECG pattern, suggesting a hereditary abnormality in cardiac function. The finding has not been corroborated through other studies.

The second theory is that SIDS is related to apnea and sleep. Steinschneider[22] studied five infants who had cyanotic and apneic episodes. He observed that frequent periods of apnea occurring during REM sleep are normal to early infancy, and they coincide with the peak ages of SIDS and decrease later in infancy. Not all apnea was normal, however, because some periods were prolonged, required resuscitation and were frequently associated with an upper respiratory infection. Subsequently, two of the infants died of SIDS. This theory seems to be supported by findings from recent studies. Previously, little was known about SIDS victims except that they appeared to be normally developed in-

fants. Recent evidence suggests that this may not be true. Naeye[23,31] has demonstrated specific anatomic and physiologic differences between SIDS victims and infants dying of other causes: (1) the pulmonary arteries of SIDS babies were thicker; (2) the periadrenal tissue of SIDS babies showed more brown fat; (3) the liver of SIDS babies contained more red blood cells; and (4) the muscle of the right ventricle was thicker in SIDS victims.

These findings are "consistent with the type of abnormalities commonly associated with chronic alveolar hypoxia," lending credence to the theory that apnea is implicated in the final pathway leading to death. Naeye also studied the birth records of infants who died from among a cohort of over 50,000 births. He noted that infants who became SIDS victims had lower Apgar scores, more neurologic and feeding difficulty and more respiratory distress during the neonatal period than infants dying from other causes.[24,36] Naeye[24] and Peterson[10] have shown that SIDS babies also had less satisfactory postneonatal growth and development than normal infants. At birth, SIDS victims were in the 40th percentile of height/weight, while at death they were in the 20th percentile.

Other differences between SIDS and normal infants were found through retrospective review of prenatal and postnatal records of infants who subsequently died from SIDS. SIDS victims demonstrated (1) abrupt changes in fetal heart rate consistent with diagnosis of umbilical cord compression;[25] (2) shorter, weaker, and less robust cry during stressful and nonstressful situations compared to surviving infants;[26] and (3) poorer autonomic control and less ability to adapt to different physiologic challenges than their surviving cohorts.[24,27,33]

All of these findings are consistent with the theory that SIDS babies experience chronic alveolar hypoxia, possibly due to brain dysfunction,[36] and therefore may be less able to maintain normal respiratory function particularly during the apneic periods which occur during sleep. It is likely that cardiac dysfunction (secondary to hypoxia) and apnea function together in the final pathway leading to death.[29]

The epidemiologic study of SIDS through routine review of death records is limited because of clinical error in correctly determining cause of death, and because death is frequently misassigned to respiratory causes such as acute interstitial pneumonitis, pulmonary edema and bronchopneumonia.[28,35] Special studies requiring linkage of birth and death records[7] and review of autopsy material have been necessary to determine the incidence and describe the demographic and epidemiologic components of SIDS.[10,29]

These techniques have been used because there was no specific code for designating SIDS deaths in the International Classification of Diseases Adapted (ICDA) prior to 1973.[28] In that year the ICDA modified its coding procedure and SIDS appears as a specific category for deaths in 1974 and 1975.

In 1964 the state of Washington passed legislation requiring autopsy in all suspected SIDS cases.[10,13] Peterson and his associates developed the *surrogate method,* an indirect technique using vital statistics to estimate the incidence of SIDS.[13] Since most cases of SIDS occur between 1-4 months of age, the number of such deaths in this age group may serve as a surrogate for the actual infant mortality from SIDS.

Review of 1,913 infant deaths in King County between 1968 and 1972 revealed that 48% of deaths to infants 1-4 months of age resulted from SIDS, and the remainder from congenital anomalies, birth injuries, and all other causes. Peterson and associates suggested that using 48% of all deaths among infants 1-4 months old per 1,000 live births per year would provide a reliable estimate of the incidence of SIDS. A more sensitive estimate was pos-

sible for white infants, since congenital anomalies and birth injuries were likely to be correctly diagnosed and deaths from those causes could be disregarded as potential SIDS deaths. Among the deaths remaining after removal of these categories among whites between 1-4 months of age, 71% were attributable to SIDS. The incidence was estimated as 71% of the deaths other than congenital malformations and birth injuries (ICDA code 740-779) per 1,000 live births. The surrogate method is the best available epidemiologic technique for estimation of incidence of SIDS, and may be used to compare incidence in different areas.[28]

Methods

Information from Texas' 1969-1972 death certificates was provided by the Texas Department of Health Resources.

All deaths of infants 1-4 months of age occurring between 1969-1972 were extracted according to race and cause of death as coded in the *International Classification of Diseases*, 8th revision, 1968. SIDS deaths for blacks were estimated as 48% of deaths from all causes, and for whites as 71% of deaths excluding those coded as congenital anomalies and birth injuries. The "white" category includes infants with Spanish surnames and other nonwhites

ICDA Category	White		Black	
	No. Deaths	%	No. Deaths	%
000-139 Infective and parasitic disease	267	12.1	95	11.3
140-239 Neoplasms	12	0.5	2	0.2
240-279 Endocrine, nutritional and metabolic diseases	33	1.5	16	1.9
280-289 Diseases of blood and blood forming organs	7	0.3	5	0.6
290-315 Mental disorders	3	0.1	0	0
320-389 Diseases of the nervous system and sense organs	82	3.7	33	3.9
390-458 Diseases of the circulatory system	47	2.1	32	3.8
460-519 Diseases of the respiratory system	616	27.9	305	36.3
520-577 Diseases of the digestive system	51	2.3	16	1.9
580-629 Diseases of the genitourinary system	8	0.4	2	0.2
680-709 Diseases of the skin and subcutaneous tissue	4	0.2	0	0
740-779 Congenital anomalies, birth injuries	558	25.2	92	10.9
780-796 Symptoms and ill-defined conditions	230	10.4	133	15.8
800-999 Accidents, poisonings, and violence	292	13.2	110	13.1
Total	2,210	100.0	841	100.0

Source: Texas Department of Health Resources mortality records, 1969-1972.

2. Distribution of SIDS deaths by category and race among Texas infants age 1-4 months, 1969-1972.

3. Estimated incidence of SIDS per 1,000 live births by race and sex. Texas infants age 1-4 months, 1969-1972.

Year	White Male		White Female		Black Male		Black Female		Total	
	No. Deaths	SIDS* Rate	No. Deaths	SIDS* Rate	No. Deaths	SIDS† Rate	No. Deaths	SIDS† Rate	White SIDS Rate	Black SIDS Rate
1969	270	1.99	176	1.36	138	4.07	104	3.09	1.68	3.58
1970	246	1.73	182	1.36	133	3.63	90	2.54	1.55	3.09
1971	233	1.66	197	1.48	114	3.08	89	2.49	1.57	2.79
1972	247	1.89	163	1.31	95	2.68	78	2.26	1.60	2.47
Totals	996	1.84	718	1.38	480	3.35	361	2.59	1.61	2.98

*Estimates represent 71% of deaths in infants ages 1-4 months excluding congenital anomalies and birth injuries.
†Estimates represent 48% of deaths from all causes in infants ages 1-4 months.[13]
Source: Texas Department of Health Resources mortality records 1969, 1972.

since that format is used in the Texas Vital Statistics[30] annual reports. The net effect is that estimates for whites are slightly higher than expected in areas where a large proportion of the population is Mexican-American. Indians and Orientals contribute about 1% of births and infant deaths, and their effect on the estimates is negligible. Certain estimates have been weighted to reflect the differences in ethnic distributions of various sections of Texas. These estimates also reflect the greater risk known to be associated with Mexican-American and black populations.[7]

Estimated incidence by race, sex, public health region, and Standard Metropolitan Statistical Areas (SMSA) were calculated. Estimates by county were not attempted because many rural counties do not have enough births or infant deaths to give reliable estimates.

Results

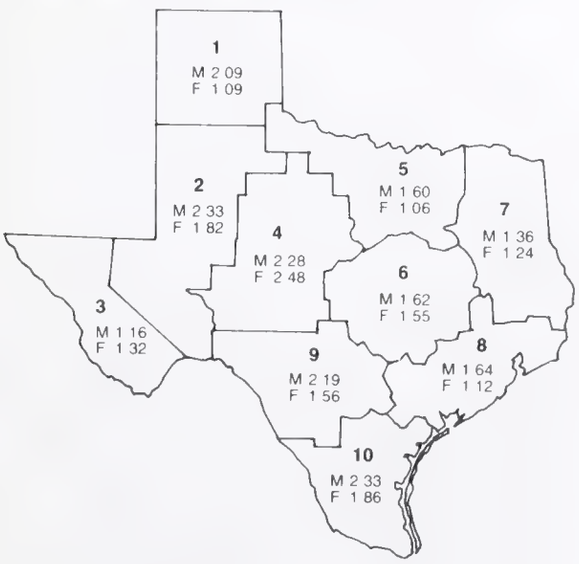
Fig 2 shows the distribution of causes of deaths by category and race for infants of ages 1-4 months between 1969-1972. Diseases of the respiratory system comprised the largest group of deaths for both whites and blacks. Other leading categories in-

4. Rank order of estimated annual incidence of SIDS per 1,000 live births by race, sex, and public health region. Texas infants age 1-4 months, 1969-1972.

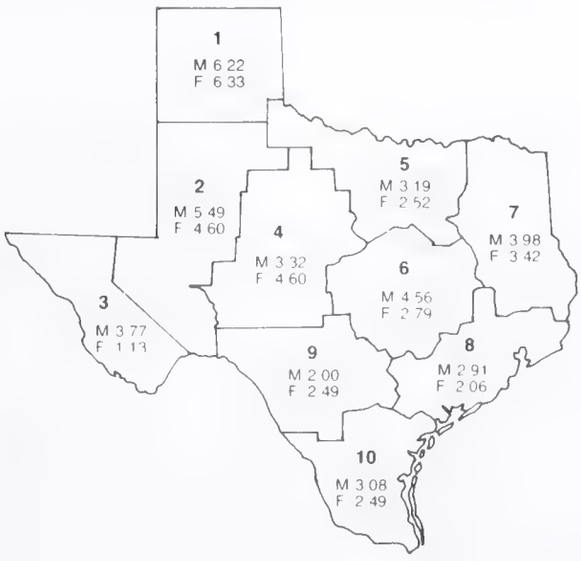
White Male			Black Male			White Female			Black Female		
Region	Rate	SE	Region	Rate	SE	Region	Rate	SE	Region	Rate	SE
2	2.33	0.12	1	6.22	2.45	4	2.48	0.30	1	6.33	2.95
10	2.33	0.26	2	5.49	0.90	10	1.86	0.13	2	4.60	0.84
4	2.28	0.38	6	4.56	0.78	2	1.82	0.10	4	4.60	1.70
9	2.19	0.26	7	3.98	0.46	9	1.56	0.14	7	3.42	0.38
1	2.09	0.54	3	3.77	2.19	6	1.55	0.24	6	2.79	0.27
8	1.64	0.13	4	3.32	1.25	3	1.32	0.06	5	2.52	0.26
6	1.62	0.07	5	3.19	0.47	7	1.24	0.11	10	2.49	1.00
5	1.60	0.08	10	3.08	1.83	8	1.12	0.06	9	2.49	0.66
7	1.36	0.25	8	2.91	0.18	1	1.09	0.27	8	2.06	0.19
3	1.16	0.29	9	2.00	0.79	5	1.06	0.05	3	1.94	1.13
Total	1.84	0.24		3.35	1.13		1.38	0.15		2.59	0.94

SE: Standard error

5. Estimated annual incidence of SIDS per 1,000 live births by sex and region. White Texas infants age 1-4 months, 1969-1972.



6. Estimated annual incidence of SIDS per 1,000 live births by sex and region. Black Texas infants age 1-4 months, 1969-1972.



cluded congenital anomalies and birth injuries; accidents, poisonings, and violence; infective and parasitic diseases; and symptoms and ill defined conditions.

Fig 3 shows the estimated SIDS incidence per 1,000 live births by race, sex, and year. The rates for males exceed those for females in both races, and blacks of both sexes had higher rates than whites. There was an overall decline in the rates between 1969-1972. Rates in whites declined 4.8% from 1.68 to 1.60 per 1,000 live births, and rates in blacks declined 31% from 3.58 to 2.47/1,000 live births. In both races, the decrease in rates for males exceeded that for females.

Fig 4 shows the rank order of the estimated annual incidence of SIDS among infants 1-4 months of age per 1,000 live births by race, sex, and public health region. The regions are ranked in decreasing order of incidence. Figs 5 and 6 graphically depict the data for white and black infants, respectively. For white infants, regions 2, 10, and 4 had the highest rates for both sexes, while regions 1 and 2 were highest for black infants of both sexes. Lowest rates were not consistently associated with any region although regions 3, 8, and 9 were among the lowest in at least two of the four race-sex groups.

Peterson[37] has shown that the incidence of SIDS is similar in climatically different areas. The higher rates in northern regions (1, 2, and 4) probably reflect their rural character rather than their climate, although it is possible that the higher elevation in regions 1 and 2 may precipitate death in potential SIDS victims. In more urbanized areas in the southern part of the state (regions 3, 8, and 9), the rates are lower. It is difficult to know whether the lower rates in the more urban regions actually imply lower risk of SIDS, or whether they reflect underreporting of infant deaths in border areas (region 3); better health care or diagnostic skill in populated regions with more medical services (regions 8 and 9); or are the end result of a complex self-selection process leading to concentration of low-risk infants in some areas and high-risk infants in others.

Fig 7 shows the estimated incidence per 1,000 live births between 1969-1972 among infants 1-4 months old by race and SMSA. The estimates reflect the proportion of infants with Spanish surnames in the appropriate SMSA. The ten largest SMSAs in Texas include the following urban centers and the surrounding counties as assigned by the 1970 census:

1. Dallas-Fort Worth: Collin, Dallas, Denton, Ellis, Hood, Kaufman, Johnson, Parker, Rockwall, Tarrant, and Wise Counties.
2. Houston: Brazoria, Fort Bend, Harris, Liberty, Montgomery, and Waller Counties.
3. San Antonio: Bexar, Comal, and Guadalupe Counties.
4. El Paso: El Paso County.
5. Beaumont-Port Arthur-Orange: Hardin, Jefferson, and Orange Counties.
6. Austin: Hays and Travis Counties.
7. Corpus Christi: Nueces and San Patricio Counties.
8. McAllen-Pharr-Edinburg: Hidalgo County.
9. Lubbock: Lubbock County.
10. Galveston-Texas City: Galveston County.

McAllen-Pharr-Edinburg and Lubbock had the highest, and Beaumont-Port Arthur-Orange and Galveston the lowest estimated rates for whites. Lubbock and Austin had the highest, while San Antonio and the Houston, Beaumont-Port Arthur-Orange areas had the lowest rates for black infants.

Fig 8 provides the number of estimated annual SIDS deaths among infants 1-4 months old by race and sex in each of the public health regions and largest SMSA centers in Texas. Since SIDS deaths in this age group comprise 80-85% of SIDS deaths in infants under 1 year of age,[3,4,7] the total number of expected annual deaths

between 1969 and 1972 would be larger than that given.

The reader may wonder if these estimates can be extrapolated to the current year. It is likely that the estimates given in Fig 8 reasonably approximate the current SIDS incidence in Texas for infants under 1 year old. This would be true if one assumes that the trend toward fewer SIDS deaths noted in Fig 3 and by other inves-

7. Estimated incidence of SIDS per 1,000 live births by race and Standard Metropolitan Statistical Area. Texas infants age 1-4 months, 1969-1972.

SMSA	White	Black
Lubbock	1.86	3.64
El Paso	1.20	2.83
Dallas-Fort Worth	1.33	2.81
Austin	1.60	3.58
Houston	1.35	2.41
Beaumont-Port Arthur-Orange	1.12	2.41
Galveston	1.17	2.62
San Antonio	1.76	2.36
Corpus Christi	1.83	2.69
McAllen-Pharr-Edinburg	2.53	0

8. Estimated annual deaths from SIDS by sex, race, and public health regions and by ten largest SMSAs. Texas infants age 1-4 months, 1969-1972.

Public Health Regions	Number of Deaths						
	Males		Females		Total		Both Sexes
	White*	Black	White*	Black	Males	Females	
1	6	1	3	1	7	4	11
2	14	3	10	2	17	12	29
3	6	1	7	0	7	7	14
4	7	1	7	1	8	8	16
5	37	16	23	18	53	41	94
6	13	7	12	5	20	17	37
7	7	9	6	7	16	13	29
8	35	19	23	13	54	36	90
9	26	1	18	2	27	20	47
10	27	1	20	1	28	21	49
Total	178	59	129	50	237	179	414
SMSA							
Lubbock	4	1	2	1	5	3	8
El Paso	5	1	6	0	6	6	12
Dallas-Fort Worth	33	12	18	13	45	31	76
San Antonio	25	1	17	2	26	19	45
Austin	5	2	4	1	7	5	12
Houston	26	14	17	10	40	27	67
Galveston	2	1	1	1	3	2	5
Beaumont-Port Arthur-Orange	3	2	2	2	5	4	9
Corpus Christi	7	1	5	0	8	5	13
McAllen-Pharr-Edinburg	8	0	6	0	8	6	14

*Weighted by the proportion of infants with Spanish surnames.

tigators,[6] continued between 1972 and 1976, and if the decrease was approximately equal to the number of SIDS deaths occurring in infants between 4 months and 1 year old (equivalent to 15-20% of total SIDS deaths), and the pattern of infant deaths remained the same over the interval of time.

We hope that these estimates may serve as a useful guide to the extent and distribution of SIDS in Texas, and that they will help clinicians, public health workers, counselors and others who care for, locate, or assist families stricken with the tragedy of a sudden infant death.

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The authors, The University of Texas School of Public Health, PO Box 20186, Houston, TX 77025.

Reprint requests to Dr. Roht.

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Stressful doctor-patient relationships

John P. Vanderpool, MD

Intense and prolonged stress has powerful and often destructive effects. Researchers have demonstrated that those persons who encounter too many stressful life events in too short a period of time are more likely to contract serious diseases, including such divergent conditions as myocardial infarction, depression, and tuberculosis.[1]

"Life changes" is a term now used to describe events such as death of the spouse, demotion, taking important exams, moving to another city, or anything that forces a person to change or adapt. Generally, personal events that involve loss require greater adaptation and, on a scale devised to quantify stress, are given more stress points (death of spouse rates 100). A person who accumulates more than 200 points within two years is considered to be in jeopardy. Physicians are no exception.[1]

Illness is only one of the results of too much stress. The stressed person who regularly experiences a discrepancy between the demands placed upon him and what he feels he can give in return, will be more physically exhausted, less mentally alert, less able to enjoy his work, more likely to feel (and be) harassed by the "pressures of life." Such is the case with many physicians.

I think that difficult patients are one important source of physicians' stress. "Difficult patients" as used in this article describes those patients who, because of their behavior or condition, strain the relationship or "get to" the doctor and cause him greater stress than he already has. Even one such patient can be troublesome enough—for example, one who repeatedly calls night and day—and a number of such patients can be devastating.

The purpose of this article is to increase the physician's awareness of the stress that difficult patients place upon him, and to help him understand the problems that such patients present so that they can be more easily managed. What sorts of patients cause greatest stress on physicians? How do physicians add to the stress? What can be done about the problem?

The Doctor-Patient Relationship

The doctor-patient relationship is basically a *contractual agreement* between two parties who play *distinct roles* within the framework of certain crucial *human emotions*. Each of these three components (role, contract, human emotion) needs clarification and explanation so that this relationship can be fully understood.

Role

The role of the doctor is that of professional who gives medical care. As a professional, he is expected to be the authority, to be knowledgeable, skillful, understanding, objective, and able to help (competent). In contrast, the role of the patient is that of one who is in need of medical services. Often sick and debilitated, the patient is not expected to know what is wrong with him or how to treat himself. He is the receiver-of-medical-care who looks to the doctor for help.

When medical care is being given, the two parties need to stay in their roles, since the purpose of such roles is to maximize the possibility that high quality medical care be given. If, for example, the doctor gets out of his role and becomes a "buddy" to his patient, he risks losing his objectivity and his professionalism, which reduces the possibility that he can,

with a calm head, accurately assess the patient's condition and make the sometimes crucial decisions that he is called upon to make.

Contract

Understanding the contractual agreement between doctor and patient is absolutely essential in order to conceptualize their relationship clearly.

The contract between a doctor and his patient, though unwritten, contains all of the components of a rational business contract between two parties: (1) the intention is plain, (2) two distinct acts are performed (making an offer, accepting the offer), (3) each party realizes something out of the contract, (4) the parties' minds are in accord, (5) the parties accept responsibility for their part of the contract, (6) discharging of the contract is plainly discernible, and (7) breach of contract is also discernible.

Applying this information about professional contracts in general to the doctor-patient contract in particular, the doctor-patient contract has plain intention (medical services), involves two distinct acts (the doctor offers medical services and the patient accepts), and each party realizes something out of the contract (the patient receives medical service and the doctor receives his fee). Their minds are in accord (the doctor and patient agree on the services to be provided), and each accepts responsibility for his part of the contract (the doctor for the medical services, the patient for cooperating with the doctor and paying his fee). The contract is discharged when the agreed-upon treatment is completed and the doctor is paid. Breach of contract can be clearly discerned when the doctor fails to render agreed-upon treatment or when the patient refuses to cooperate or refuses to pay.

It is easy to see in terms of a contractual arrangement how certain situations strain the doctor-patient relationship: When the patient does not pay the physician, he violates the contract and creates in the doctor a justifiable feeling of having been cheated. When the doctor and patient have not agreed on the specific medical services to be provided, one may feel he has done his duty, whereas the other feels he has not been given what he came for.

Irrational features, in addition, often strain even the best of doctor-patient contracts. Rationally speaking, the doctor-patient contract has limits and boundaries; the contract begins when the doctor and patient agree upon the specific kind of medical services to be given and ends when such services have been completed. With human nature as it is, however, irrational features (covert goals, magical expectations, and wishful fantasies) begin to creep in and an agreed-upon, rational, limited contract can quickly be subverted. This distortion of the contract is a particular hazard in difficult doctor-patient relationships. For example, the doctor who treats a young patient who has acute leukemia has a difficult task at best. He hopes to get his patient in remission. He also hopes to cure this patient. He wishes that his patient would never die. His patient also hopes for remission. He also hopes that he can be cured. He wishes, too, that he will never have to die. Almost invariably, as such a patient begins to show the signs of incurability, his physician makes fewer visits. (Who wants to face death and his own limitations?) The patient becomes depressed or angry or both, particularly if he does not believe in an afterlife, for

what patient wants to die? The anger may be directed at the doctor since he did not cure the patient, even though the doctor never promised to do so.

These irrational features need to be recognized as important. Complex in nature and ever present, they are often a source of help as well as a source of problems; hope rides upon them, as does optimism. It is not uncommon for patients to see their doctor in an unrealistic role, as an all-powerful and all-knowing semideity who can magically remove the painful conditions of life.

Human Emotion

The doctor-patient relationship is subject to most of the emotions that exist between people: anger, envy, joy, sadness, lust, care, boredom, and so on. Some of these emotions must be limited if the relationship is to be a good, working one. Obviously if anger is too intense or lust too strong, the relationship will become unworkable. The word "work" is crucial. Emotions which assist the work and the effective discharge of the central task include "professional" kinds of emotions: respect, concern, understanding, trust. Such emotions add to the quality of the relationship, assist in establishing rapport, and even aid in curing the patient. For example, the physician who stays in role and establishes a clear contract with a new cancer patient but fails to convey human concern for him risks losing the patient because, in this situation, the emotional interchange between the doctor and his new and often frightened patient is more important than the other aspects of the relationship.

Difficult Patients

Each physician has his or her own way of feeling and behaving, and at times will have a highly individualized reaction to a given patient. This kind of personality clash creates a difficult situation for both doctor and patient. Because they are so specific, it is not possible to cover these kinds of highly personal reactions. Nevertheless, it is important to recognize that they add to the stress that a physician carries, and that they often need to be discussed with a colleague or other professional if they continue to be a source of trouble.

The following discussion presents six patient types that generally give physicians difficulty, some of the ways in which physicians add to the problem, and practical suggestions and principles for use in dealing with such patients.

Regressed and Childish Patients

It is common for people to become more childish when they see a physician, and particularly when they are hospitalized to undergo treatment for serious illness. It is not only common, but also normal for regression to occur to some degree. After all, sick hospitalized people are treated somewhat like babies: they are fed, bathed, kept bedfast, and wheeled around. Regression is accentuated when the patient is severely ill (especially with a severe head injury), when he has personal stress in addition to his physical illness, and when he is given drugs that boggle his mind. In the latter case, the physician contributes to the severity of the regression. Of course, patients who tolerate stress poorly and who have a more imma-

ture personality regress more quickly and severely than others.

Some regressed patients whine and cry, others throw temper tantrums, others get quiet and shy. The type of regression will depend on the patient's personality makeup. Too, the regression may wax and wane, depending on such variables as the amount of sleep the patient gets, the amount of pain he experiences, the time of day, and the patient's current physiology.

Patients who are severely regressed for relatively long periods of time are difficult to treat precisely because of the childish behavior. Irrational concerns become foremost, sometimes taking over all three aspects of the doctor-patient relationship to the extent that they distort roles, alter the contract, and sorely threaten the helpful human emotions previously discussed.

Some physicians seem not to understand the phenomenon of regression and are easily angered and irritated by it. They may react in a childish manner, creating the scene of two upset children in one small room! Of course, the patient becomes even more childish when he is treated in such a fashion.

The problem can be partially, if not totally, alleviated by recognizing the phenomenon soon after it occurs and then taking the appropriate steps to help correct the reaction. Appropriate steps include understanding the reason for the reaction (head injury? fear? chronic depression? recent diagnosis of cancer? and so forth), remaining calm and reassuring and letting the patient know you understand, not taking the reaction personally, discontinuing medication that contributes to the regression, and giving the patient more control over his life—including letting him know what is coming next—thereby treating him more like an adult, and eventually helping him get physically and mentally well and back to normal. The latter point emphasizes the fact that regression usually corrects itself when the patient feels better and regains his physical and emotional health.

Angry and Aggressive Patients

A frontal attack by a patient whom we want to help is always distressing. There are many shades of angry behavior: personal indictment, harsh criticism, verbal abuse, physical abuse, ridicule, and so forth. Anger cannot be tolerated for a long time unless the physician likes torture. It stresses the doctor-patient relationship by negating the important positive human emotions that are needed for an effective doctor-patient relationship. What physician can continue to show respect and concern for a patient who repeatedly berates him? Anger is best dealt with immediately and rather firmly with open-ended questions, which lead to an understanding of the reason for the reaction. It should not be allowed to go on and on without resolution.

A crucial aspect of the solution of the problem lies in remaining objective and calm, yet firm. The goal is to reestablish a workable doctor-patient relationship with appropriate boundaries. This is harder to do if the doctor becomes defensive, angry, and irrational. The doctor must realize that the patient's angry reaction usually is both an aspect of regressive behavior and a defense against feeling vulnerable in a hospital setting. The patient's words often give this away: "You don't scare me!" "Get out of my room!" "I am leaving this damn hospital!"

The physician must be willing to think how he may have contributed to the problem: has he stepped outside of the boundaries of the relationship and, in suddenly deciding to "straighten things out," made the patient angry? Once the reaction is dealt with, a workable and useful doctor-patient relationship may follow. If the doctor remains bitter and angry toward the patient after the problem has been resolved, he should strongly consider referring the patient to another physician, since he can no longer be objective. This occurs most frequently when the physician does not deal with the problem when it first arises.

Seductive Patients

Most seductive patients, although they express overt, "adult" sexual behavior, are needful and demanding. They seek their doctor's affection and attention, hoping thereby to be able to solve various personal problems; they may be very appealing to the needful or naive physician. There are many kinds of seductive patients, including the young, the old, and those of the same sex as the physician.

Generally, seductive patients present a physical ailment in order to get a "ticket" to visit the doctor. Their ulterior motive is quickly apparent because of their behavior and because they ask questions that involve the physician's personal life. If the physician goes along with one personal question, such as "Are you married?" others will follow. He must decide when to deal with this problem, and how to determine what real difficulty lies behind the patient's presenting symptoms and seductive behavior. He can select any number of approaches: He can avoid the personal questions and continue with his task of interviewing, he can briefly and factually answer the question and go on with the task, or he can pause in the interview (particularly if he has been asked several personal questions) and inquire whether the patient may have problems other than the presenting complaint. He should not allow himself to be trapped, and he should stay within the boundaries of the doctor-patient relationship even though he may be tempted to violate them. The physician must understand that the seductive patient's overtures also should not be taken personally; seductive behavior is a reaction to what the physician represents and is based on wishful fantasies. Technically speaking, it is a transference reaction. All physicians must understand that they will be sexually attracted to certain patients, and that becoming a professional includes the art of putting one's personal needs aside and attending to the legitimate needs of the patient.

Dying Patients

I use the term "dying patients" to describe those whose disease no longer responds to medical treatment and who, because of their disease, are expected to die within a relatively short time. It is no secret that physicians find it difficult to deal with dying patients, and often make fewer and shorter visits even though they know that such patients need their support and help during the final days of their lives.

How can this behavior be explained? First, few people will approach the dying; they find it too painful and difficult. Who wants to get to know and become more attached to someone who will soon die? Second, physicians often view death as an enemy to be conquered. Most physi-

cians feel a sense of personal achievement when they are able to diagnose and treat a deadly disease, but when faced with a dying patient, physicians feel helpless and useless. Who wants to feel that way?

Third, a problem in the definition of what constitutes medical services arises, for the dying patient "needs emotional support, but will not respond to medical treatment." This comment implies that providing emotional support is not the same as giving medical services. I think most doctors feel that giving emotional support is not synonymous with giving medical services, and that when a dying patient cannot be cured, the physicians work is ended. Those physicians who deeply believe that providing continued emotional support *is* a vital part of their work are more likely to follow their dying patients closely. For these and other reasons, physicians dread seeing dying patients and find them stressful to deal with.

Dying patients go through several important stages.[2] These stages are similar to those found in most separation experiences (death is the final separation) and include (1) protest, (2) mourning, and (3) acceptance.[3] As dying patients proceed through these stages, they demonstrate denial, anger, depression, and withdrawal. Denial is more apparent in the first stage, anger and depression in the second, and withdrawal in the third. These stages and their concomitant affects are all part of a natural life-process that unfolds only at this the last stage of life. Frequently, patients can deal constructively with this process and gain from it, particularly if they have someone to help them through it. It has been shown that dying patients are in a different psychological state than are healthy patients. They do not fear talking about dying as healthy people do, but frequently can (and want to) talk about it, and will do so with their physician if he can comfortably discuss it.[3] The physician who cares for such patients should, therefore, endeavor to understand the psychology of dying, and also his own concerns about death, so that he can deal with dying patients effectively. Unfortunately, most practicing physicians were not introduced to these ideas in medical school, and must learn about them in postgraduate training courses, papers, or teaching tapes.*[2,3]

Practical ideas regarding working with dying patients include (1) letting them ventilate their feelings and thoughts, (2) continuing short visits and going through the usual procedures of ward rounds, (3) letting them have, as much as possible, their last wishes—friends to visit, as much or as little pain medicine as they need, favorite foods, and so forth, (4) allowing ourselves to be sad over the loss and to get extra encouragement from others, and (5) getting others to help with the dying patient if we are unable to give adequate assistance ourselves.

Dependent and Needful Patients

Patients with continuous strong dependency needs make many demands of the physician, and he frequently begins to feel totally responsible for their well-being. Such patients are different from those who become dependent upon the doctor because of severe illness with its associated (and normal) regression, which resolves when the patient recovers.

These patients have more than episodic periods of dependency associated with illness. They seem to be dependent most

*A teaching tape, "Caring for Dying Patients and Their Families," is available at the UTMB Postgraduate Education Office.

of the time, even when they are healthy. Their basic problem is that they want to be taken care of rather than take care of themselves, and they often attach themselves to care-giving people. To the extent that the physician has an inner need to take care of others, and has difficulty setting limits on himself and others, he will have difficulty with such patients. Vicious cycles ensue: the patient asks for help, the doctor gives it; the patient asks for a little more, the doctor gives it, too; the patient asks for even more, the doctor gets frustrated but still gives more, the patient . . . it goes on and on.

The essential element in dealing successfully with these patients is that the doctor recognize dependency, that he set reasonable but firm limits on dependent patients, that he not go beyond what he feels is his part of the contract, and that he not be seduced into taking care of the whole person rather than his medical problems.

The majority of dependent patients will learn to live with the limitations that their physician sets, although they will not be happy about it. The physician must learn to let the dependent and often unhappy patient stay frustrated to some degree, for otherwise he will be hooked into the all-caring, but very draining, position again.

A few such patients are not content to live within the boundaries of a healthy doctor-patient relationship. They demand more. In this case, the physician must be willing to let them go. Amazingly, as they sense this willingness, most patients will then finally accept the doctor's limits. The stress from these patients in large part relates to this struggle, and it is no wonder that physicians become frustrated. Those who learn to turn this frustration into a healthy and firm "no" when appropriate will have success with most such dependent patients and will feel less harassed by them.

Chronic Complainers and Incurables

Chronic complainers need not be defined. Every physician knows who they are. Incurables include those patients who never get well and, in fact, often get worse with medical treatment; in a sense, they refuse to get well. These two types of patients are listed together because of the similarity of the problem they present to the physician: In spite of adequate medical treatment, they fail to respond. The interaction with incurables goes something like this: The doctor makes a diagnosis and initiates a treatment plan; the patient may respond momentarily, but quickly relapses and complains more, appearing to be more ill. The doctor responds with more rigorous treatment; the patient again does not respond and complains even more bitterly, often appearing to be more ill and irritated and disturbed. The doctor responds by giving even more rigorous treatment, but the patient becomes even more disturbed. Unless the doctor recognizes that these patients want to hang on to their symptoms, he is in for trouble.

The reasons for some patients' behaving in this fashion are multiple and relate to secondary gain. The patient's illness itself is important to him; it helps him avoid certain stressful situations, gets him out of certain responsibilities, ensures attention, and so forth.

Secondary gain can be difficult to spot, particularly when a patient appears to be in much distress. In some cases, differentiation between patients who are very sick because of complex and elusive disease processes and those who appear to be sick because of issues related to second-

ary gain is impossible. Every conscientious physician wrestles with this problem, and does not want to miss an authentic medical condition. Even more difficult are those patients who have *both* problems, a medical illness and strong secondary gain. In these cases, being able to be objective and to see the whole picture is absolutely essential if the physician is to understand what is going on. Sometimes a consultant, having no previous knowledge of the case, is in a better position to evaluate the total situation.

Physicians who desperately need to see their patients respond to treatment, who do not recognize this problem, and who refuse to give up have greater difficulty with these patients. As Main has stated: "Refusal to accept therapeutic defeat can . . . lead to therapeutic mania, to subjecting the patient to what is significantly called 'heroic surgical attack,' to a frenzy of treatments each carrying more danger for the patient than the last, often involving him in varying degrees of unconciousness, near-death, pain, anxiety, mutilation or poisoning."[4]

In these situations, both physician and patient have a problem: The physician cannot admit that he has limitations and that some patients will not respond to his treatment; the patient will not accept as adequate his treatment efforts. The two become involved in a desperate struggle, to the detriment of both. Fortunately such situations are rare but they do occur.

The physician must maintain his perspective, and realize that his role is limited and so is his contract with the patient. This realization of his limits may not be acceptable to the physician at first, but will become increasingly so as he matures and comes to feel more content with what he can accomplish successfully.

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Dr. Vanderpool, Assistant Professor, Department of Psychiatry, The University of Texas Medical Branch, Galveston, TX 77550.

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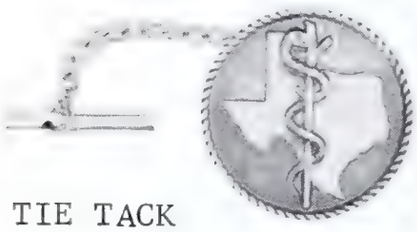

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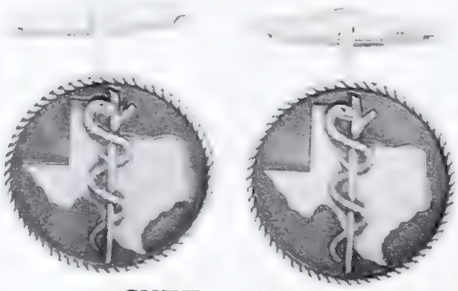

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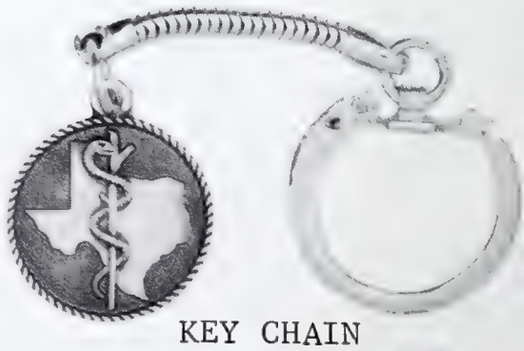

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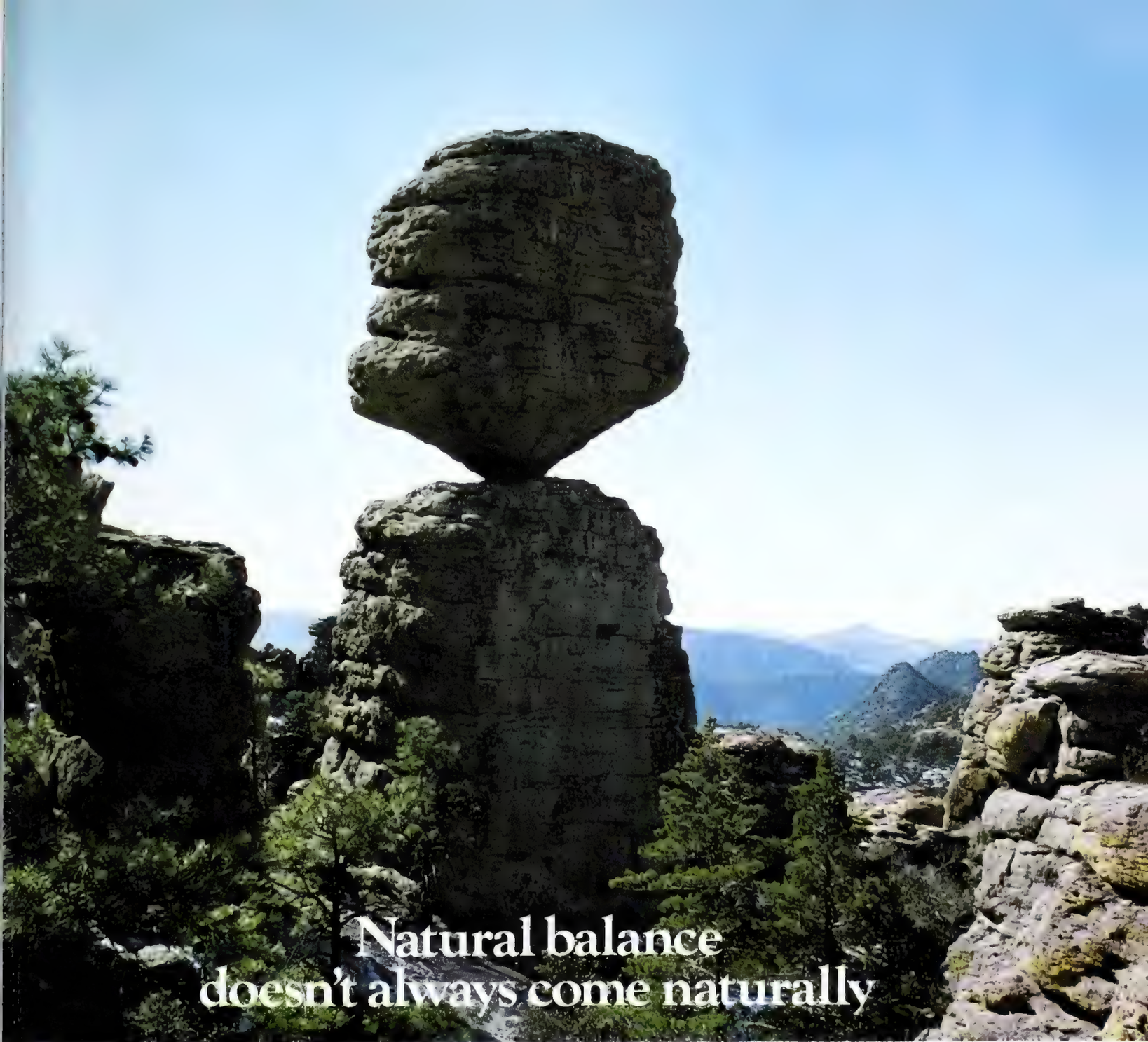

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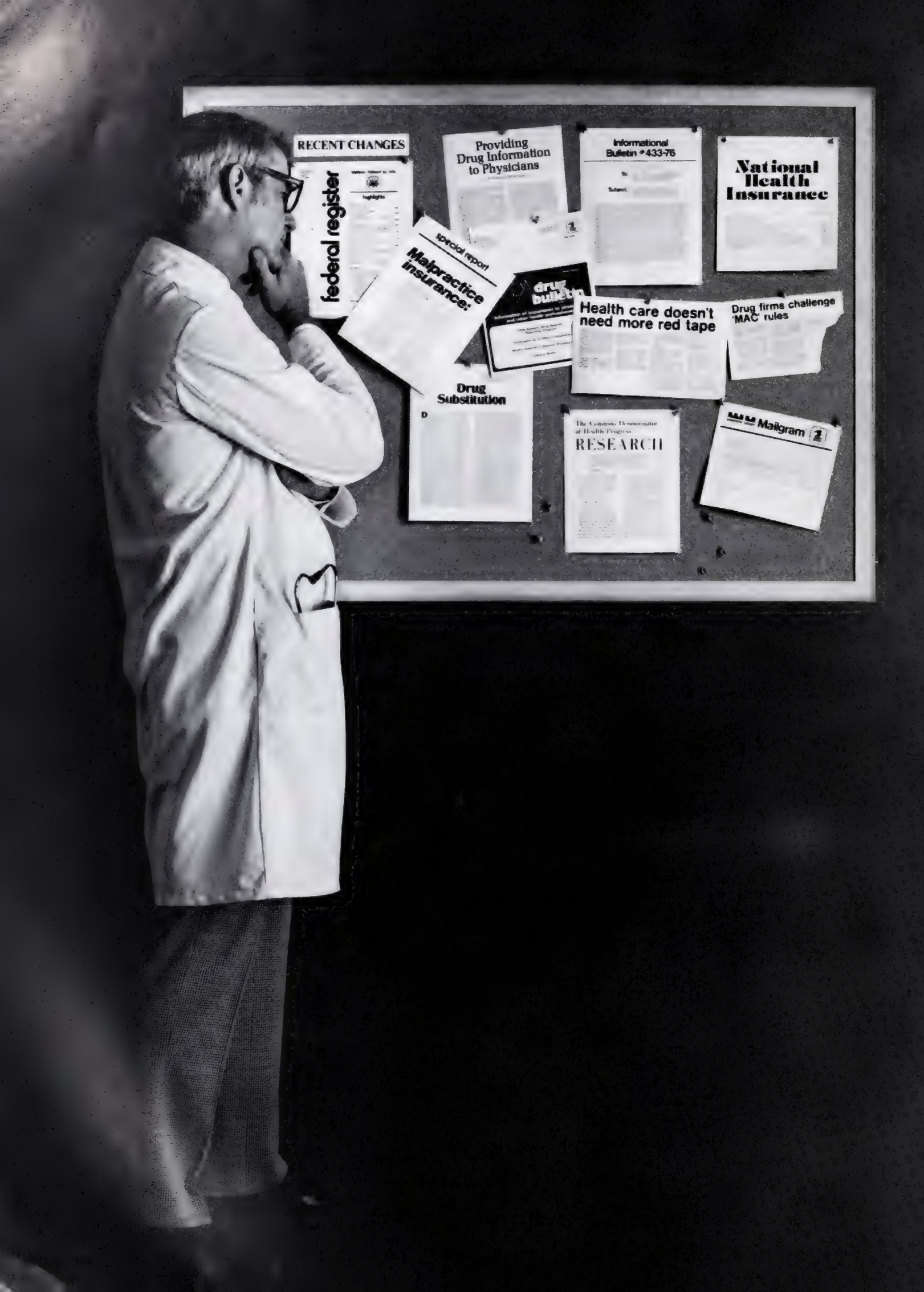
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The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

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Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

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Epidemiological survey of physical child abuse

William N. Friedrich, MPH

Harris County Child Welfare intake reports of physical child abuse for a 17-week period during 1974 and 1975 were analyzed. Abuse was distributed evenly across the four quadrants of the county, and no significant racial differences were noted. A fairly high rate of unemployment and an extremely high rate of marital discord characterized the abusing families. Groups at risk were determined to be male infants, children under age 6, illegitimate children, and females age 12 and older. A rate of 182 per 100,000 children age 18 and under was determined on the basis of 424 cases. An analysis of reporters and reporting patterns was also performed.

In Gil's 1970 study[1] of the 12,610 confirmed reports of physical child abuse in the United States during the years 1967 and 1968, Texas ranked first among the 50 states, with reported rates of 24.0 per 100,000 children under age 18 in 1967, and 31.2 per 100,000 children under age 18 in 1968. Numerous criticisms were directed to Gil's findings, among them being more inclusive child abuse reporting procedures in Texas at the time of the survey. Even Gil noted that the reporting levels were not closely related to the state's population, and depended more on legal, professional, and administrative factors.

Recently, stricter and more inclusive child abuse reporting laws have been passed in many states, and new estimates of actual abuse run up to 500,000 cases every year.[6] Approximately 4,000 cases of suspected abuse were reported in 1973 in Texas, and 2,509 were confirmed. Of these, 135 were cases of sexual abuse, and there were at least 104 deaths attributed to child abuse during the same year.[7] The Harris County Child Welfare Unit investigated an average of 60 reports of abuse per month in 1973, compared with 30 a month in 1972.[2] The figure for 1974 climbed to around 90 reports per month in Harris County, and more than 100 per month for the first four months of 1975. The Harris County Child Welfare Unit has an estimated substantiation rate of 50-60%.[9] It is uncertain whether this increase reflects an actual rise in the frequency of abuse or an increase in the reporting of abuse.

Purpose

The Texas Family Code, Title Two, Section 34.01-.06, 1973, states that any person having cause to believe abuse has occurred shall report to the county child welfare unit, or to the county agency responsible for the protection of juveniles, including any local or state law enforcement agency.

Because of the nature of this law, a unique data source results, more complete in scope than one composed either of medical or agency reports. Consequently, an analysis of child abuse reports to the Harris County Child Welfare Unit should provide a better picture of child abuse in the county, and also the State of Texas, than would an analysis of medically reported abuse, which has been estimated to account for only 2% of all reports.[3]

Method

For a 17-week period, Nov 5-Dec 26, 1974, and Jan 31-April 5, 1975, intake reports (the initial report filed) describing physical child abuse (sexual abuse and/or neglect were not analyzed) were collected from the Harris County Child Welfare Unit. Surnames, house numbers, and telephone numbers had been removed from each report. Only those reports in a "continue" status were analyzed. Reports in a "clos-

ed" status included crank calls and reports in which the caller gave insufficient information. In all, 424 cases were examined, coded, keypunched, and analyzed according to 29 variables falling into seven broad categories as follows:

1. Day of Reporting.

Monday was the peak reporting day, with 102 (24.1%) reports. Thursday and Friday were second and third, respectively, with Saturday and Sunday being the slowest days. The fact that Monday, Thursday, and Friday are the peak days was additionally verified with the results of a two-year study which analyzed the number of incoming calls to the Harris County Child Welfare Unit.[5] The reporting rate for 1975 was determined from the 1970 census data (and extrapolating a population increase based on the rate of increase from 1960 to 1970) to be 182 per 100,000 children age 18 and under. With a 60% verification rate, this is more than three times the rate reported for Texas in 1968 by Gil.

2. Child Information

Fifty percent of all reports involved children age 6 years and younger. Almost 10% of the children were 12 months old or younger, and represented the highest frequency for any one-year age period in the study. The mean age of the children studied was 84.8 months (7.1 years) with a standard deviation of 58.8 months, and a range from 1 month to 17.6 years (Fig 1).

1. Age distribution of the children.

Age, Months	Age, Years	Absolute Frequency	%	Frequency Per Year	Cumulative %
1-12	0-1	39	9.7	9.7	9.7
13-72	1+-6	164	40.4	8.1	50.1
73-120	6+-10	77	19.2	4.8	69.3
121-144	10+-12	37	9.2	4.6	78.5
145-216	12+-18	88	21.5	3.6	100.0

Two hundred and thirty eight (57.9%) were white, 116 (28.2%) were black, and 57 (13.9%) were chicano. It was determined that there was no significant difference ($p > .05$) in race distribution from the population of Harris County.

Slightly more boys (215) were reported as being abused than girls (201). Again, this was not significant ($p > .05$). However, when the sex of the child was contrasted with the age of the child, it was found that these two are not independent ($p < .05$). Male children age 12 months and under were abused twice as often as females. From age 12 months through 12 years, the division between the sexes was quite even. For the category of 12 years and older, almost twice as many females were abused as males. This can be explained in part by the sexual connotations which begin to color abuse at this age.

In families with two or more children, there were no significant differences in rank of the abused child. The distribution of family size closely followed the 1968 Statistical Abstract, and there was only a small percentage of large families (more than four children).

Only 9.6% of the abused children were either in a special class or had a reported abnormality, which was not judged to be different from the percentage of abnormal children in our society, but was less than that reported by Gil.[1] Only 12 of the 161 children who were under school age attended a day care facility, which conceivably could give a stressed mother time off from her children.

3. Abuse Information

An overwhelming percentage, 85.8%, of these children were reported to have been abused previously. In 49.6% of the cases where it was known that the family had at least two children, only one child was reported as being abused. Almost all of the reported abuse, 93%, occurred in the child's house.

Types of injuries sustained are shown in Fig 2. The largest category of injuries covered bruises (39.4%). The second largest category (32.8%) was one called "physical abuse combination," and covered multiple physical injuries, for example, cuts and burns, bruises and cuts, and so forth.

4. Parent Information

It was impossible to get a valid mean age of the parents. From 80 cases, the mothers' ages ranged from 15 to 55, and from 57 cases, the age range of the fathers was 17 to 55.

The marital status pattern established from the reports indicated a large percentage of unstable or multiple marriages, or both: 64.2% of the children did not have both natural parents living with them, 37.3% were being reared by only one parent or guardian (compared to only 10.5% of all families in Harris County having a female head in the 1970 census), 35.8% of the children were living with both of their natural parents, and 7% of the cases involved unwed mothers. It was found that 71.4% of the abused children of the unwed mothers were male ($p < .10$).

In 50% of the cases, it was possible to determine employment status of the parents. In 57.5% of these cases, one parent was employed; in 12.3%, both parents worked; in 10.4%, the families received Aid for Dependent Children; and in 19.8% of the cases neither parent was employed and no Aid for Dependent Children or other support was being received. Considering that unemployment was running at less than 6% during the study period, the high rate of unemployment in the group for which we had employment data is disparate from the norm.

5. Census Tract Data

Of a total of 267 census tracts in Harris County, 150 were represented in this survey. The distribution of these followed the population distribution in Harris County except for the southwest section of the county, which had (according to the 1970 census) 25.6% of the county's population but only 13% of the reported abuse. Overall, no significant differences were noted in the distribution of child abuse reports over the five census areas of Harris County—Central, Northeast, Northwest, Southeast, Southwest.

6. Abuser Status

Though at first glance the mother seemed to be the abusing parent more often than the father (41.0% versus 28.3%), this skew towards the mother reflects the large number of one-parent families in the study (35.3%), most of which were matriarchal.

In only 7.8% of the cases (32), or slightly more than 13% of the cases in which both a mother and a father were present, both parents were reported to be the abusers, lending credence to the observation that in abusing families, generally one parent in the family will perform the abuse.

7. Reporter Status

Neighbors were the most frequent reporters of child abuse; schools (teachers, nurses, principals) were second; relatives of the family were third; family friends were fourth; and agencies were fifth (Fig 3).

If this survey had been solely of medically reported abuse, only 39 cases, or 9.2% of the total, would have been inves-

2. Types of injuries sustained.

Injury Type*	Absolute Frequency	%
Bruises	162	39.4
Physical abuse combination	135	32.8
Neglect and physical abuse	77	18.7
Fractures	15	3.6
Burns	11	2.7
Cuts	6	1.5
Welts	3	.7
Gunshot	1	.3
Other	1	.3

*Mutually exclusive categories

tigated. Of these 39 cases, 19 were reported by Ben Taub Hospital, the county charity hospital, and 20 by the remaining hospitals in Houston (largely Hermann, St. Luke's, and Texas Children's Hospital). No report originated from a private physician.

In comparing the race of the child with the nature of the reporter, it was noted that charity hospitals and agencies reported blacks in 78.9 and 52.0% of the cases, respectively. This had an undetermined skewing effect on the representation of minorities and the poor in the population of the study.

Summary

Although abusing families in Harris County seem to be slightly skewed toward those families that are not as well off and are less well educated, child abuse was found to cut across all lines of race, education level, and socioeconomic category, with the skew resulting from the fact that the poor tend to be in greater contact with agencies and charity hospitals which, in turn, are more likely to report abuse to authorities.

In addition, what seems to distinguish the abusing family more than any other single category of a socioeconomic nature is marital discord and the aberrant family life and conditions that accompany it.

A number of groups in Harris County seemed to incur a greater frequency of abuse—illegitimate babies, children under age 6, male babies, and female teenagers.

In comparing the reporting rate that was computed as a result of this survey with Gil's report for the State of Texas in 1968, there seems to be a wide discrepancy between this survey's rate of 182 cases of reported child abuse per 100,000 children age 18 and under during 1975 (based on projected population figures for Harris County in 1975), and Gil's rate of 31.2 per 100,000 children under 18. Part of this can be explained by the seven-year time separation and the change in reporting laws in Texas during that period.

It is the researcher's opinion that physical child abuse in Harris County forms only part of the problem—the abuse that is easy to verify and report—compared to the other large parts of the problem which include emotional abuse, intentional neglect, and sexual abuse. Attempts to underplay the incidence of these less easily detected problems only delays help for the many children who need it.

3. Reporter status.

Reporter Status	Absolute Frequency	%
Neighbor	91	21.5
School	86	20.3
Relative	69	16.3
Friend	28	6.6
Agency	26	6.1
Married spouse	22	5.2
Police department	21	5.0
Private hospital	20	4.7
Charity hospital	19	4.5
Divorced spouse	14	3.3
Abused child	14	3.3
Anonymous	11	2.6
Babysitter	2	.5
Other	1	.1

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Mr. Friedrich, Department of Psychology, University of North Dakota, Grand Forks, ND 58201.

The research for this article was done while the author was working toward a master of public health degree from The University of Texas School of Public Health.

Products liability for the physician

Earl F. Rose, MD, LLB; Elise C. Rose, MA

Products liability is strict liability (liability without fault) imposed upon manufacturers who produce and distribute improperly designed or defective articles that expose the consumer to unreasonable danger. Electrocautery, pacemakers, equipment used in intensive and coronary care units, heart valves and orthopedic devices are examples of the sophisticated articles used in medical practice. The physician may be called as an expert witness to testify regarding the dangers of these articles or the injuries a patient has suffered from their malfunction; and individual physicians or medical organizations can petition the Food and Drug Administration if medical instruments and devices are believed to be unreasonably dangerous.

Three statements that most physicians accept without question are: (1) Good medicine and the patient's welfare are the goals of organized medicine and of practicing physicians; (2) there is judicial and federal encroachment into the practice of medicine, the production and distribution of foods and drugs, and the manufacture of devices and products used in medical practice; and (3) physicians are increasingly the objects of litigation.

Product liability, as a legal concept, is intimately involved in the first two statements and, although at this time physicians are not the subjects of products liability litigation, our role is important because we are intimately involved with the sophisticated equipment used today in medical practice.

Product, as used in the term "products liability," means industrial and consumer products, those manufactured and placed in the stream of commerce. It is estimated that injuries connected with industrial products account for 7 million injuries each year,[1] and 20 million people in America are injured each year as a result of incidents connected with consumer products.[2] Of course, not all of these injuries result from defects in the product, but in 1969 approximately 300,000 products liability cases were filed, and as the public's awareness of potential defects in consumer products and industrial machinery increases, there undoubtedly will be an escalation of litigation. The role of the physician in products liability lawsuits is certain to increase, for if manufactured products used in medical practice malfunction or fail to perform as expected, physicians can anticipate additional lawsuits in which they will be either directly or indirectly involved. Examples of manufactured products include monitors and life-sustaining mechanical equipment in intensive care and coronary care units, pacemakers, heart valves, orthopedic devices, and so forth.

Legal Reasons for Strict Products Liability

There are public policy reasons for the development of the legal concept of strict liability for defects in products—products liability. Strict liability induces greater care in producing the article, thereby reducing injuries incurred in its use. The consumer should be able to assume that a manufactured product will be fit, assuming that the manufacturer selling the product represents that the best practices and all precautions were used in the production of the article. The victim injured in the course of using a defective product could sue on the general legal theory of negligence, however, the tort of negligence is inadequate to provide a remedy for an injured consumer who suffers damages because of a defect in a product. There are four elements which must exist before any plaintiff can

prove negligence. These are (1) a duty to conform to a certain standard of conduct for the protection of others against unreasonable risk; (2) failure to conform to the required standard of care; (3) a reasonable or close causal connection between the conduct and the damages claimed by the injured plaintiff; and (4) actual loss of damages. Formerly, there was a requirement that there be "privity" or direct dealing between the manufacturer and the plaintiff. As purchasers customarily deal with a retailer who deals with a wholesaler, these intermediaries between the manufacturer and the consumer formed a barrier—there was no privity. Although the requirement of direct dealing or privity was eliminated, the difficulty in proving a manufacturer negligent placed an almost unreasonable burden upon the injured plaintiff. Therefore, the concept of products liability developed, in which the suit is based upon the allegation that the article is not up to standard, and thus is not what the purchaser expected at the time of the purchase. Manufacturers' liability for injuries resulting from the use of manufactured products started in the food industry, where the consumer must rely on standards in the processing and manufacturing of wholesome food. This was extended to products for intimate body use, and we are in the process of seeing further evolution of this to other manufactured goods. The federal government is entering this area, particularly with regard to medical devices, machines, and prosthetics.

Strict liability is liability imposed by law without respect to fault if the article left the manufacturer's control in a dangerously unsafe condition and the defect caused the harm. The defendant manufacturer is liable whether or not he was at fault in creating that condition or in failing to discover and eliminate it. A defective product is one that is improperly designed, and the bad design is the defect because it made the product unreasonably dangerous. In deciding whether or not a product is or is not unreasonably dangerous the focus is on the product and not on the conduct of the manufacturer. The shift from negligence to strict liability requires, if nothing else, that the inquiry be focused on the product and the use of the product; and it shifts away from what the manufacturer should or should not have done or foreseen.[3]

Strict Liability Is Not Absolute Liability

A distinction must be made between strict liability and absolute liability. Absolute liability would make the manufacturer liable for all injuries resulting from the use of the article. Strict products liability does not require a perfectly safe product. An example can be found in a simple tool such as a hammer. If a hammer is used unskillfully it can result in a smashed finger; but a hammer is reasonably safe and although it perhaps could be designed to be safer, the usefulness would then be substantially impaired. The automobile is another example. Speed is implicated in many automobile accidents, and these result in injuries. But although speed can be controlled in a variety of ways, including at the point of manufacture, the fact that the injured party drove the automobile too fast does not mean that the manufacturer is absolutely liable for injuries. The manufacturer is strictly liable if there are product defects in the automobile such as defective brakes, that can be incriminated in the accident.

Legally Demonstrating Product Defects

Most strict liability cases revolve about making a determination balancing the util-

ity of the product against the magnitude of the risks. Factors to be considered in determining whether a product is defective and unreasonably dangerous, hence subject to products liability litigation, include:[4] (1) the usefulness and desirability of the product; (2) the availability of other and safer products to meet the same need; (3) the likelihood of injury and its probable seriousness; (4) the obviousness of the danger; (5) common knowledge and normal public expectation of danger; (6) the avoidability of injury by care in use of the product (including the effect of instructions or warnings); and (7) the ability to eliminate the danger without seriously impairing the usefulness of the product or making it unduly expensive.

Unfortunately, the trouble with products liability litigation is that it tends to emphasize the injury to the plaintiff, often turning entirely on the issue of whether the product could have been made safer and the injury avoided. The public policy involved in products liability is that the cost of the injury is a cost of the product; it is the product itself rather than the manufacturer's conduct that should be tried.[5] The product is examined and, if found wanting, the manufacturer is responsible for damages accruing.

The manufacturer's knowledge at the time of design is of the greatest importance, and the manufacturer may be charged with knowing as a matter of law any scientific fact about the dangerous properties of his product unless he comes forward with some evidence to rebut a presumption that he should have known it.[6] This does not mean that there is a presumption or inference of a product's dangerous condition simply from showing that an injury was suffered simultaneously with its use; however, if expert evidence is introduced that a condition of the product was dangerous, a presumption or inference may often be indulged that the manufacturer should have been aware of it.

Physician's Role in Products Liability Litigation

There are two areas in products liability litigation in which physicians are intimately involved. The first is as an expert testifying about the product, and the second is as a defendant.

The product is the object being examined at the time of the trial in an attempt to determine (1) if the product was defective and unreasonably dangerous; (2) if the defect existed at the time the product left the manufacturer; (3) if the defect caused the injury; and (4) if the harm or injury is assignable to the manufactured product. Obviously, this requires the use of an expert witness or prides of experts. The *Duquesne Law Review* published a scholarly collection of articles on products liability in the Spring, 1974, issue. The validity of expert testimony and evidence is analyzed, and the need for truly qualified experts is emphasized.

When products are defective and patients are injured during the course of their use, the physician may find himself as a party defendant to the litigation. There are a number of cases directly bearing on this subject. Malfunction of electrosurgical instruments with resulting severe harm to patients is a common example. Normally, when physicians are operating in a hospital, they have the legal right to assume that the equipment is maintained in a safe fashion and in working order unless, for some reason, they have reason to believe

that the equipment is defective.[7] If the physician fails to act upon the belief that there is defective equipment, and injury to the patient results, the physician may well be liable. In products liability suits, the statute of limitations does not begin to run until the patient is aware or informed or knows of the relationship between the device and the complaint (injury).[8]

There are several reported cases involving products liability. The court in *Dreiling vs General Electric Co.*[9] held the manufacturer not liable in either negligence or strict liability for injuries associated with the removal of a pacemaker which was recalled by the manufacturer. These pacemakers developed anomalous mode of operating by increased pacing rate. The manufacturer informed all physicians purchasing this group of pacemakers, and it offered to bear cost of replacing them, including hospital and surgical costs. The plaintiff had her pacemaker replaced, but claimed damages of $150,000 for pain and suffering and for disability, disfigurement, and scarring. The manufacturer defended on the ground that the pacemaker was manufactured with all possible human skill and caution. The jury found for the manufacturer, and on appeal it was ruled that this was a question of fact, a jury question to decide if the pacemaker was defective at the time it was sold.

When an instrument breaks and the patient is injured, and there is a question of negligence by the physician in breaking the tool, or of the manufacturer in manufacturing and distributing the surgical instrument, the physician and hospital must prove innocence in products liability suit. In one case, the cup of a pituitary rongeur broke off and lodged in a patient's spine. The burden of coming forward with explanatory evidence was shifted to the physician, hospital, manufacturer, and distributor.[10]

Physician and Governmental Role in Promoting Product Safety

Both society and our government are sensitized to the necessity of enhancing the safety of industry's wares. Individual physicians and organized medicine have a valid interest and concern, and it is the responsibility of the medical profession to prevent the manufacture and distribution of medical instruments and devices that are unreasonably dangerous. This can be done by petitioning the Food and Drug Administration[11] or the Consumer Product Safety Commission* under the authority provided by the Consumer Product Safety Act.[12] The Consumer Product Safety Act has as its purpose the protection of the consuming public against unreasonable risks of injury, and the development of uniform safety standards against which a manufacturer's product may be tested.† The petitioning physician should show that the product either presents an unreasonable risk of injury, or exposes the petitioner or patient to a risk or injury.

Also, physicians as experts may become involved in the Medical Device Bill which

*The Consumer Porduct Safety Commission administers the Hazardous Substances Act, the Poison Prevention Packaging Act, and the Flammable Fabrics Act.

†Mandatory standards by the Consumer Product Safety Commission include those imposed in response to petitions, on architectural glass, power lawnmowers, and space heaters. Industrial groups that have sought Commission actions include the Toy Manufacturers of America, the Outdoor Power Equipment Institute, the National Swimming Pool Institute, and Bicycle Manufacturers Association of America.

was introduced into Congress as an amendment to the Federal Food, Drug and Cosmetic Act. This bill is designed to protect the public health and to assure the safety of medical devices. The amendment includes classification of medical devices and provides for classification panels. It gives authority to establish performance standards; to scientifically review certain medical devices; to establish good manufacturing practice requirements; and to provide for inspection, registration, records, and reports. General provisions of advisory panels and research are also included.

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Dr. Earl F. Rose, Professor of Pathology and Lecturer in Law; Ms. Elise C. Rose, Research Assistant, University of Iowa, Iowa City, IA 52242.

Major court decisions that have influenced the practice of medicine

Earl F. Rose, MD, LLB

The subject, "major court decisions that have influenced the practice of medicine," is justified by the quotation, "What is past is prologue," from Shakespeare's *The Tempest*. We look to past legal cases and precedents as prologue shaping following cases, thus shaping the practice of medicine. I have chosen a few court decisions that have had a major impact upon medical practice, and also some decisions that have great importance in shaping the future practice of medicine. They, as the prologue, suggest coming developments.

It is practically obligatory, when discussing landmark legal cases that have shaped medical practice, to start with a reference to medical malpractice, for this type of case has a great impact upon physicians practicing today. The first reported medical malpractice action in these United States was *Cross vs Guthery*,[1] in which a surgeon amputated the scrofulous breast tumor of the plaintiff's wife "in an unskillful, ignorant and cruel manner, contrary to all well known rules and principles of practice in such cases." She died three hours later. The plaintiff sought damages of £1,000, but ultimately received £40 and costs. The rule of this case is that "an action against a surgeon for damages lies in favor of the husband against a surgeon for unskillfully operating upon his wife, not withstanding she dies in the operation."*

The English enjoy priority in medical malpractice lawsuits for their first reported case took place in 1374, against one surgeon, J. Mort.[2] The plaintiff's injured hand was so impaired by the surgeon that he brought action. The surgeon won the case because of a legal technicality, but the rule was established that if negligence were proved, the law would provide a remedy.†

Another early English medical malpractice case established a precedent that is still followed, for the court held that the basis of malpractice suit lies in the tort of negligence, and is not based on a contract to cure. To this day physicians do not "contract" guaranteeing the result. The principal opinion in this case of *Everard vs Hopkins*,[3] was written in 1650 by the noted English jurist, Sir Edward Coke. The master Everard sued Hopkins, a "common chyrurgeon" (surgeon) for breach of contract maintaining that the surgeon had guaranteed to cure the servant, and had failed due to the application of "unwholesome" medicine. A contract customarily requires an offer, an acceptance, and the exchange of something of value (consideration). The master offered money (5 marks) to have the servant cured, and the surgeon accepted but did not successfully perform—to the servant's injury. Lord Coke stated that the servant could sue the surgeon for negligence, but not for breach of contract, for the servant had not contracted with the surgeon. The suit apparently ended in a stalemate for "(the) whole Court inclined to be of opinion for the plaintiff, that the action was well brought, but the pleading not good nor formal, and so no judgment was given in the case . . ."

Stare Decisis

From these decisions, and from subsequent published decisions of the courts, has developed the doctrine of *stare decisis:* A decision of one of the higher courts has

*See also: Sandor, AA: History of Professional liability suits in the United States. JAMA 163:459-466, 1957.

†There may have been earlier suits in England of which there are no records, for the official records of cases decided (known as "plea rolls") were not maintained until the reign of Richard Coeur de Lion, at the close of the 12th century.

the force of law, and is binding in all future cases.

The law is the cement that holds civilization together, so to be cohesive, that law must provide certainty and predictability. The certainty and predictability of law are embodied in the terms, *"stare decisis"* and *"status quo."* The courts will abide by or adhere to previously decided cases, at least insofar as the same principle or law is involved. We adhere to the precedent of prior cases, thus we have stability, predictability, and *status quo*.

If a published opinion is the product of an appellate court in one's own state, it is binding on the trial courts of that state, unless it can be distinguished on its facts. When in a particular state or jurisdiction there is a novel situation or a new question on which there is no prior lawsuit for a precedent, the court will look for guidance to the decision of another state or jurisdiction, for a state is ordinarily bound only by the precedents of its own state appellate or supreme courts or, on federal questions, by precedent of the United States Supreme Courts.

Regulation of Medical Practice

Laws governing the practice of medicine have been imposed by civil authorities from earliest recorded times, but these regulations have not gone unchallenged by the medical profession. The earliest known system of laws is that of Hammurabi, King of Babylon, written about 2200 BC. Of the 282 paragraphs in the Code of Hammurabi, 8 sections deal with the fees to be paid physicians for their services and the punishments to be imposed in the event that injury or death resulted from the physician's treatment (ie, "If a surgeon should treat a gentleman with a bronze lancet and cause either death or loss of an eye, the surgeon's hand should be cut off, but if he causes the loss of a slave, he need only provide a new slave." Section 618, Code of Hammurabi).

The power of the state to impose regulations upon the practice of medicine was decided by the United States Supreme Court in the *Dent vs West Virginia*[4] case in 1889. It was argued before the United States Supreme Court that to allow the states to impose regulations upon practitioners of medicine, requiring them to satisfy specific statutory requirements and qualifications, violated the Fourteenth Amendment of the Constitution by denying persons certain liberties (that of practicing medicine) "without due process of law." Before the Civil War there were practically no laws restricting the practice of medicine to persons possessing certain qualifications. During the colonial period there were medical practice acts, in fact Virginia had such a law as early as 1639; and by 1800, such laws had been enacted in 13 of the 16 states.[5] However, these laws restricting the practice of medicine were amended or repealed, and by 1850 there were virtually no regulations governing the practice of medicine in any of the states. The decline in the competence and skill of medical practitioners led to the enactment of state laws governing those engaging in the practice of medicine. But the constitutionality of these statutes was in doubt until the court, in *Dent vs West Virginia*,[6] held:

"The power of a State to make reasonable provisions for the qualifications of those engaging in the practice of medicine and punishing those who attempt to engage therein in defiance of such statutory provisions, is not open to question. The power of the State for the general welfare of its

people authorizes it to prescribe all such regulations, as, in its judgment, will secure or tend to secure them against the consequences of ignorance and incapacity as well as of deception and fraud. The nature and extent of the qualifications required must depend primarily upon the judgment of the state as to their necessity. If they are appropriate to the calling, or profession, and attainable by reasonable study or application, no objection to their validity can be raised because of their stringency or difficulty. It is only when they have no relation to such calling or profession, or are unattainable by such reasonable study and application, that they can operate to deprive one of his right to pursue a lawful vocation."

The federal government has not made attempts to require a general federal licensure, but it is probably constitutional and within the scope of the United States Congress to do so. The right of Congress to require physicians to obtain a federal permit to use and prescribe narcotics has been upheld.[7]

Most physicians would approve of the decision in the *Dent* case, or at least accept the wisdom of the right of the state to dictate the standards and qualifications for those practicing in the state. Inasmuch as the state can secure the citizens "against the consequences of ignorance and incapacity," there can be little question that this includes the right to demand that physicians attend to their continuing education. The object of such legislation does seem to meet a legitimate aim of the state in protecting the citizens. These laws are legitimate exercises of a governmental unit's power to legislate for public health, welfare, and safety. In *State of Iowa vs White*,[8] the Iowa Supreme Court held that it was constitutional for the State Board of Medical Examiners to prohibit persons from practicing medicine under the regulations of the statutes.

The holding in *Raven vs Bierring*[9] was that these functions "are within the police powers of the State." The state can regulate the personnel, facilities, equipment, and medications that can be utilized in what is loosely referred to as the health services industry.

Implied Warranty of Safety for Human Use

Implied warranty (guarantee) or "strict liability without fault" is a legal doctrine that does not apply to practicing physicians. However, legal cases bottomed on *warranty for fitness for human use* have had an impact on medical practice, insuring as they do that patients receive drugs and material that are warranted safe and "wholesome."

There is a distinction between warranty and the tort of negligence. When suing on warranty, the injured patient-plaintiff does not have to prove that anyone, including the manufacturer, was at fault. All that the plaintiff has to show is that the product that came to the market was an unwholesome product, and that this product was the proximate or direct cause of the injuries. The legal justification for the doctrine of "strict liability" is that when a manufacturer puts a product into the flow of commerce, he implies a warranty that the product is fit for human use. Otherwise, it would not be safe to buy food and other necessities, and public policy requires that the food we buy be safe for our use. The same applies to drugs and will apply to mechanical devices used in medical practice.

It is difficult for an injured plaintiff-patient to prove negligence against a large

firm or drug manufacturer, and before the warranty cases, the doctrine of *res ipsa loquitur,* "the thing speaks for itself," was applied to faulty products. The doctrine of *res ipsa loquitur* applied to a faulty product was succinctly set out in the case of *Pillars vs R. J. Reynolds Tobacco Co.*[10] The court said, "We can imagine no reason why, with ordinary care, human toes could not be left out of chewing tobacco and if toes are found in chewing tobacco it seems to us that somebody has been very careless." Today, the case would be tried under the rule of strict liability—that the product placed in the stream of commerce was not wholesome.

Both Salk[11] and Sabin[12] poliomyelitis vaccines have been involved in landmark legal cases holding the manufacturers liable for injuries (paralysis) resulting from the use of the vaccines, although both products are produced within strict federal government standards. In the *Salk* case, the manufacturer argued that public policy would be served best by denying recovery in warranty for new drugs, for allowing recovery would retard the development of medicines. It is somewhat surprising that the medical profession supported the manufacturers in these strict liability cases, where the faulty vaccine resulted in paralysis.

Suffice to say, the supervision of manufactured material is the more stringent as the doctrine of implied warranty of fitness for human use has been applied; thus we are sure (guaranteed) that our patients receive only material that is safe and "wholesome."

Vicarious Liability—Our Brother's Keeper

Moving from strict liability for manufacturers, we look to an expanding field of liability for practicing physicians. Physicians are not only their brother's keepers in a moral sense, but it appears that physicians are, or will be, legally responsible for the quality of medicine practiced by other physicians. Medical practice has been labeled a "cottage industry" with great autonomy by individual physicians. More and more, medical practice assumes the mantle of a corporate enterprise with structured administration with rules and regulations, initiated by physicians, professional associations, and state and federal agencies operating at the direction of the congress.

Many of the rules and regulations are couched in terms of quality control, good medicine, and better treatment for the patient—goals which physicians individually and collectively support—but in achieving these worthy goals there is the constant requirement of monitoring the quality. Physicians in many instances have the responsibility to monitor the quality, and it is but a fractional move from responsibility to legal liability if the quality is not satisfactory. Thereby, physicians become each other's keepers. This is a form of *vicarious* liability.

The most familiar form of vicarious liability for the physician is *respondeat superior,* or "the captain of the ship doctrine." Here the physician, as the one asserting authority, is responsible for the actions of others functioning under his or her supervision and control. A second example of vicarious liability is bottomed in the legal principle of principal-agency. The principal, or employer, is liable for negligent acts of the agent, or employee, for negligence is imputed in law to the principal in hiring the negligent individual.

As physicians assume additional responsibility for the acts of fellow practi-

tioners in the forms of peer review and quality control, it is probable that liability will be allocated if this peer review or quality control is not carried out with appropriate diligence. The rule of law then becomes: As a standard of medical care is established, physicians become responsible for the maintenance of this standard of care, even though this standard is imposed upon the physicians by an agency, bureau, or association.

The precedent for this may be found in the case of *Dorrence Kenneth Darling, II, vs Charleston Community Memorial Hospital.*‡[13] The plaintiff-patient, Dorrence Darling, II, age 18 years, suffered a leg fracture in a college football game. He was taken to the emergency room of the defendant-hospital where the physician on emergency call treated him by reducing the fracture and placing the leg in a plaster cast. The plaintiff suffered great pain and his toes, which protruded from the cast, became swollen and dark. The cast was notched the following evening and two days later it was split. In the course of splitting the cast the leg was cut and foul-smelling blood and seepage escaped. Fourteen days after the accident the plaintiff was referred to another physician, and since the fractured leg contained considerable amounts of dead tissue resulting from interference with the circulation of blood to the limb, the leg was amputated eight inches below the knee. The physician initially treating the patient settled out of court, and was not a party to this suit. The suit was against the hospital, with the plaintiff contending that the hospital was negligent in:

1. Permitting the physician to do orthopedic work of the kind required in this case, and not requiring him to review his operative procedures to bring them up to date.
2. Failing, through its medical staff, to exercise adequate supervision over the case.
3. Not requiring consultation, particularly after complications developed.
4. Not seeing that Standards for Hospital Accreditation of the American Hospital Association were followed.
5. Not bringing the dereliction of standards and established practice to the attention of the hospital administrator, or the administrator was derelict in not bringing them to the attention of the medical staff, or the staff was negligent in failing to take action.

The hospital lost the lawsuit and paid the damages in this case. The implications are major, for this decision implicated a number of people with responsibilities. A listing of those with responsibilities, and therefore legal liability, would include:

1. The treating physician, who acknowledged negligence in the instant case.
2. The hospital. The hospital, as a corporate entity, could not deny liability claiming that a corporate entity does not "practice medicine." The court, in quoting the case of *Bing vs Thunig,*[14] said:

> "The conception that the hospital does not undertake to treat the patient, does not undertake to act through its doctors and nurses, but undertakes instead simply to procure them to act upon their own responsibility, no longer reflects the facts. Present-day hospitals, as their manner of operating plainly demonstrates, do more than furnish facilities for treatment. They regularly employ on a salary basis a large staff of physicians, nurses, and interns, as well as administrative and manual workers, and they charge patients for medical care and treatment, collecting for such services, if necessary, by legal action. Certainly, the person who avails himself of 'hospital facilities' expects that the hospital will attempt to cure him, not that its nurses or other employees will act on their own responsibility."

3. The individuals in the hospital's em-

‡In Texas, one appellate court has not followed the precedent of the Darling decision.

ploy who may be directly responsible, such as nurses, technologists, and assistants.

4. The medical staff in failing to exercise adequate supervision.

5. The trustees or board of directors who have the ultimate responsibility in the modern hospital to: (a) appoint the medical staff, and (b) formulate the rules and regulations governing the hospital.

In common practice, the trustees or the board of directors ratifies the rules and regulations recommended by the medical staff. When appointments are made, they consult with or defer to the medical staff to determine if the appointees are competent and ethical. The medical staff jealously guards its professional prerogatives, but trustees or members of the board of directors may, in some future decisions, be held liable for their negligence in the appointment of a negligent physician to the medical staff. To prevent this, the medical profession must guard against professional incompetence, both individually and collectively.

A Higher Standard of Care

Most physicians are convinced that a court should not establish a standard of care for the practice of medicine; nevertheless, courts have done so. The usual standard of care the law requires of physicians is that degree of skill of the reasonable, prudent physician in good standing, in the same neighborhood, in the same general line of practice. It is customarily required that expert testimony by another physician be used to establish this standard of care. But there are notable exceptions to this general rule. In the case of *Helling vs Carey*,[15] in the face of expert testimony that the standards of the medical profession had been followed, the court found the standard to be inadequate and the physicians negligent.

Two ophthalmologists practicing as a partnership failed to test a patient for glaucoma, even though she had no symptoms of the disease. She first consulted the physicians at age 23 years for myopia, nine years before her glaucoma was diagnosed by tonometry and examination of visual fields. She filed suit alleging that the ophthalmologists were negligent in not testing for glaucoma. The medical defense was that the physicians adhered to the requisite standard of care practiced in that city, which did not require routine testing of patients under the age of 40 years for glaucoma because the incidence in patients under age 40 was 1 in 25,000 persons. The court, in holding the physicians liable, noted that people under age 40 are entitled to the same protection afforded persons over 40, and concluded:[16]

> "Under the facts of this case reasonable prudence requires that timely giving of the pressure test to this patient. The precaution of giving this test to detect the incidence of glaucoma to patients under 40 years of age is so imperative that irrespective of its disregard by the standards of the ophthalmology profession, it is the duty of the courts to say what is required to protect patients under 40 from the damaging results of glaucoma.
>
> We therefore hold, as a matter of law, that the reasonable standard that should have been followed under the undisputed facts of this case was the timely giving of this simple, harmless pressure test and that, in failing to do so, the ophthalmologists were negligent, which proximately resulted in the blindness sustained by the patient for which the ophthalmologists are liable."

Physicians may find this result difficult to accept; however, there is ample precedent in law for the courts to find a standard of care usually practiced by an occupation or profession to be unsatisfactory. The hornbook case is that of the *T. J. Hooper*.[17] Two tugboats, one being the *T. J. Hooper*, were lost off the New Jersey coast during a gale. The loss could have been averted

had the masters of the tugs put into harbor. However, they had no warning of the gale because they had no wireless receiving sets to obtain the weather forecasts. The defense was that the standard of care for tugboats did not require wireless receiving sets. Judge Learned Hand said:[18]

> "There are, no doubt, cases where courts seem to make the general practice of calling the standard of proper diligence; we have indeed given some currency to the notion ourselves . . . Indeed in most cases reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices. It never may set its own tests, however persuasive be its usage. Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission . . . We hold the tugs liable therefore because, had they been properly equipped, they would have got the Arlington (weather) reports. The injury was a direct consequence of this unseaworthiness."

Conclusion

Law encompasses all man's complex activities, and sparks from all of the sciences may be uncovered in the ashes of the law.

Law strives for certainty and predictability so that mankind can know how to conform his activities to what is required. However, there are changing social, economic, and moral conditions, and the law must change during the times they are applied. There have been great changes in the law, particularly in the past decade. These changes trouble citizens, for they bring less certainty and predictability. Although there are great changes, they are always made with due process, and their thrust has ever been to protect the individual citizen.

Likewise, protecting the individual has been the constant theme of the landmark legal cases that have shaped medical practice. They have established that: (1) the citizen has a right to sue for injury; (2) the citizen may be protected by licensing laws restricting the practice of medicine to those meeting certain professional requirements; (3) manufacturers are strictly liable if food or drugs put in the flow of commerce are "unwholesome;" (4) physicians have some communal responsibility for the proper care of people, and in the future may be required to work more diligently to maintain the standards of the profession; and (5) the courts may, on occasion, establish a standard of care higher than that currently exercised by a profession.

These are some of the court decisions affecting medical practice, and each is "a judicial declaration of preemptive public policy (that has) expressed the manifest will of the people."[18]

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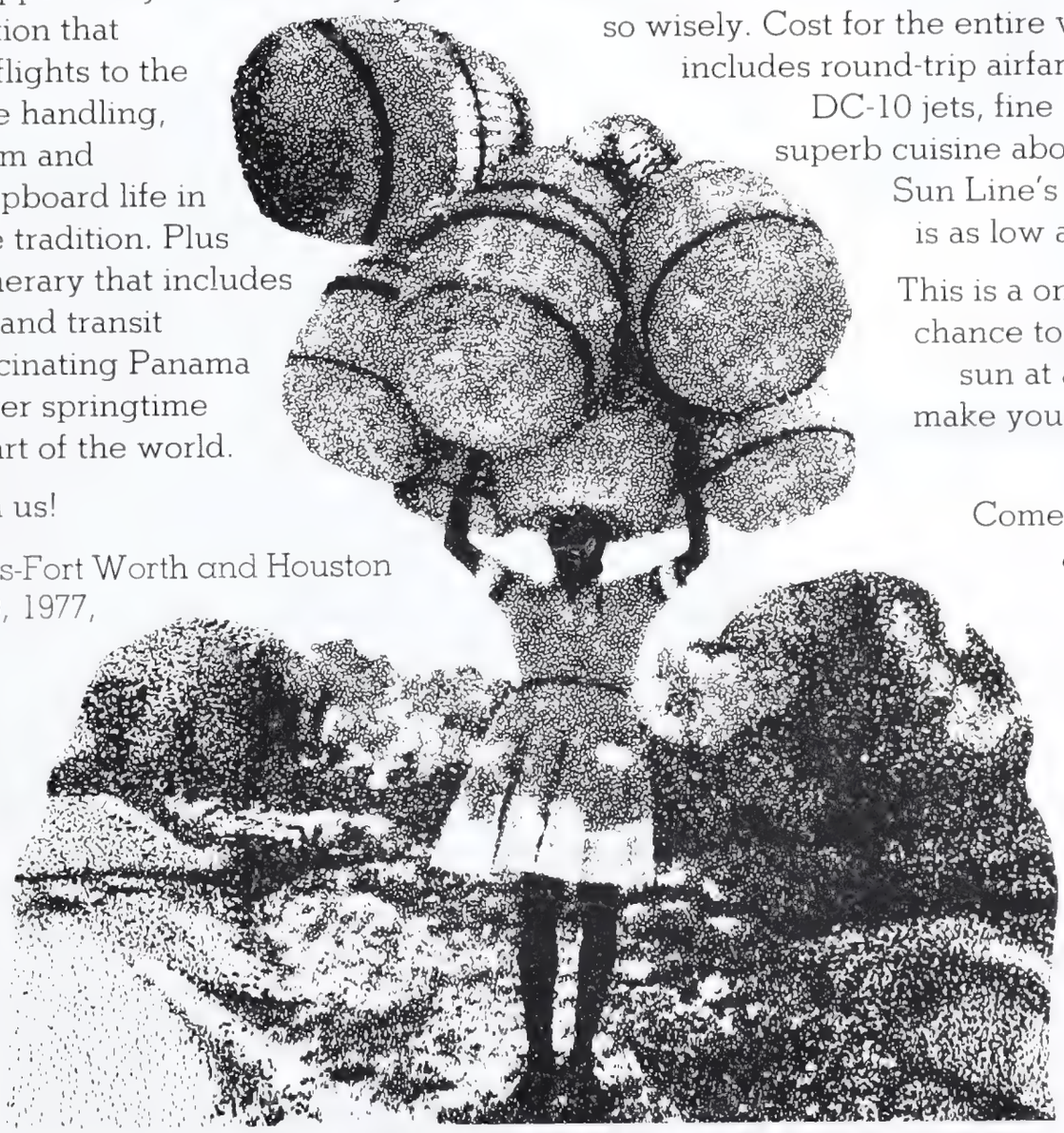

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THE REPUBLICANS

Less government, less spending, less inflation and no comprehensive national health insurance are all keys to President Gerald Ford's campaign. A favorite idea of the President's, to consolidate federal health programs into a single grant to each state, is part of the Republican party platform. Ford favors coverage of catastrophic illness under Medicare and opposes a constitutional amendment to prohibit abortion.

The Republican party is working against any form of mandatory comprehensive national health insurance. Perhaps there are no greater differences between the two parties than on health issues. The GOP opposes further intrusion from Washington in health care delivery and believes in preserving privacy between a patient and a physician. With regard to abortion, the GOP supports "continuance of dialogue on abortion and supports the efforts of those who seek enactment of a constitutional amendment to restore protection of the right to life for unborn children." The Republicans also urge reform of the welfare system without federalizing it and urge improvement of the Medicare program to control cost increases.

The Republicans charge that national health insurance would increase federal spending by more than $70 billion in its first full year and require a personal income tax increase of approximately 20 percent. The party platform concentrates most of its fire on Congress. Republicans begin the platform by urging voters to read both party statements and by warning that the Democratic platform could cost as much as $200 billion annually.

Portions of the Republicans' health care planks are: "Every American should have access to quality health care at an affordable price. The possibility of an extended illness in a family is a frightening prospect, but, if it does happen, a person should at least be protected from having it wipe out lifetime savings. Catastrophic expenses incurred from major illnesses and accidents affect only a small percentage of Americans each year, but for those people, the financial burden can be devastating. We support extension of catastrophic illness protection to all who cannot obtain it. We should utilize our private health insurance system to assure adequate protection for those who do not have it. Such an approach will eliminate the red tape and high bureaucratic costs inevitable in a comprehensive national program. The Republican party opposes compulsory national health insurance . . . We oppose this huge, new health insurance tax. Moreover, we do not believe that the federal government can administer effectively the Democrats' cradle-to-grave proposal. The most effective, efficient and economical method to improve health care and extend its availability to all is to build on the present health delivery and insurance system, which covers nine out of every ten Americans. A coordinated effort should be mounted immediately to contain the rapid increase in health care costs by all available means, such as development of healthier life styles through education, improved preventive care, better distribution of medical manpower, emphasis on out-of-hospital services and elimination of wasteful duplication of medical services.

Federal health programs should be consolidated into a single grant to each state, where possible, thereby allowing much greater flexibility in

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setting local priorities. Our rural areas, for example, have different health care delivery needs than our cities. Federal laws and regulations should respect these differences and make it possible to respond differently to differing needs. Fraud in Medicare and Medicaid programs should be exposed and eliminated. The Republican Party applauds the enlightened programs that address mental retardation, cerebral palsy, epilepsy and other developmental disabilities that seek to remove us from the dark ages in these areas. Alcoholism and drug abuse, growing problems in America today, should receive the utmost attention. While we support valid medical and biological research efforts which can produce life-saving results, we oppose any research on live fetuses. We are also opposed to any legislation which sanctions ending the life of any patient."

THE DEMOCRATS

Promoting the Democratic party, former Georgia Gov. Jimmy Carter supports a platform that calls for more spending and more federal government, advocating federal action to solve problems. Carter favors a mandatory comprehensive national health insurance program with minimal out of pocket costs for patients. He also favors cost and quality controls on the program. Asked how he would finance and implement the program Carter has responded, "Well, I don't know the answer . . . But I would like to reserve the right to include a private sector, say Blue Cross Blue Shield as a co-partner with the federal government in the administration of a national health insurance program."

The Democratic party is committed to enactment of a comprehensive national health insurance program with universal and mandatory coverage, financed by employer-employee shared payroll taxes and general tax revenue. The Democrats are stressing the need for improved access to care, particularly for the underserved population. They call for rates for institutional and physicians services to be set in advance. The Democratic platform finds it undesirable to amend the Constitution to overturn the recent Supreme Court abortion decision. The Democrats specifically ask for increased federal aid to medical research laboratories seeking cures of specific conditions and call for a reduction of the health cost for the elderly.

Portions of the Democrats' health planks are: "In 1975 national health expenditures averaged $547 per person—an almost 40 percent increase in four years. Inflation and recession have combined to erode the effectiveness of the Medicare and Medicaid programs. An increasingly high proportion of health costs have been shifted back to the elderly. An increasing Republican emphasis on restricting eligibility and services is emasculating basic medical care for older citizens who cannot meet the rising costs of good health. We need a comprehensive national health insurance system with universal and mandatory coverage. Such a national health insurance system should be financed by a combination of employer-employee shared payroll taxes and general tax revenues. Consideration should be given to developing a means of support for national health insurance that taxes all forms of economic income. We must achieve all

that is practical while we strive for what is ideal, taking intelligent steps to make adequate health services a right for all our people. As resources permit, this system should not discriminate against the mentally ill. Maximum personal interrelationships between patients and their physicians should be preserved. We should experiment with new forms of medical care delivery to mold a national health policy that will meet our needs in a fiscally responsible manner. We must shift our emphasis in both private and public health care away from hospitalization and acute care services to preventive medicine and the early detection of the major cripplers and killers of the American people . . . National health insurance must also bring about a more responsive consumer-oriented system of health care delivery. Incentives must be used to increase the number of primary health care providers, and shift emphasis away from limited-application, technology-intensive programs. By reducing the barriers to primary preventive care, we can lower the need for costly hospitalization. Communities must be encouraged to avoid duplication of expensive technologies and meet the genuine needs of their populations. The development of community health centers must be resumed. We must develop new health careers, and promote a better distribution of health care professionals, including the more efficient use of paramedics. All levels of government should concern themselves with increasing the number of doctors and paramedical personnel in the field of primary health care . . . Alternative approaches to health care delivery, based on prepayment financing, should be encouraged and developed. The cost of a (national health insurance) program need not exceed the (8.3 percent of our Gross National Product) this nation currently expends on health care; but the resulting improvement of health service would present a major improvement in the quality of life enjoyed by Americans at all economic levels."

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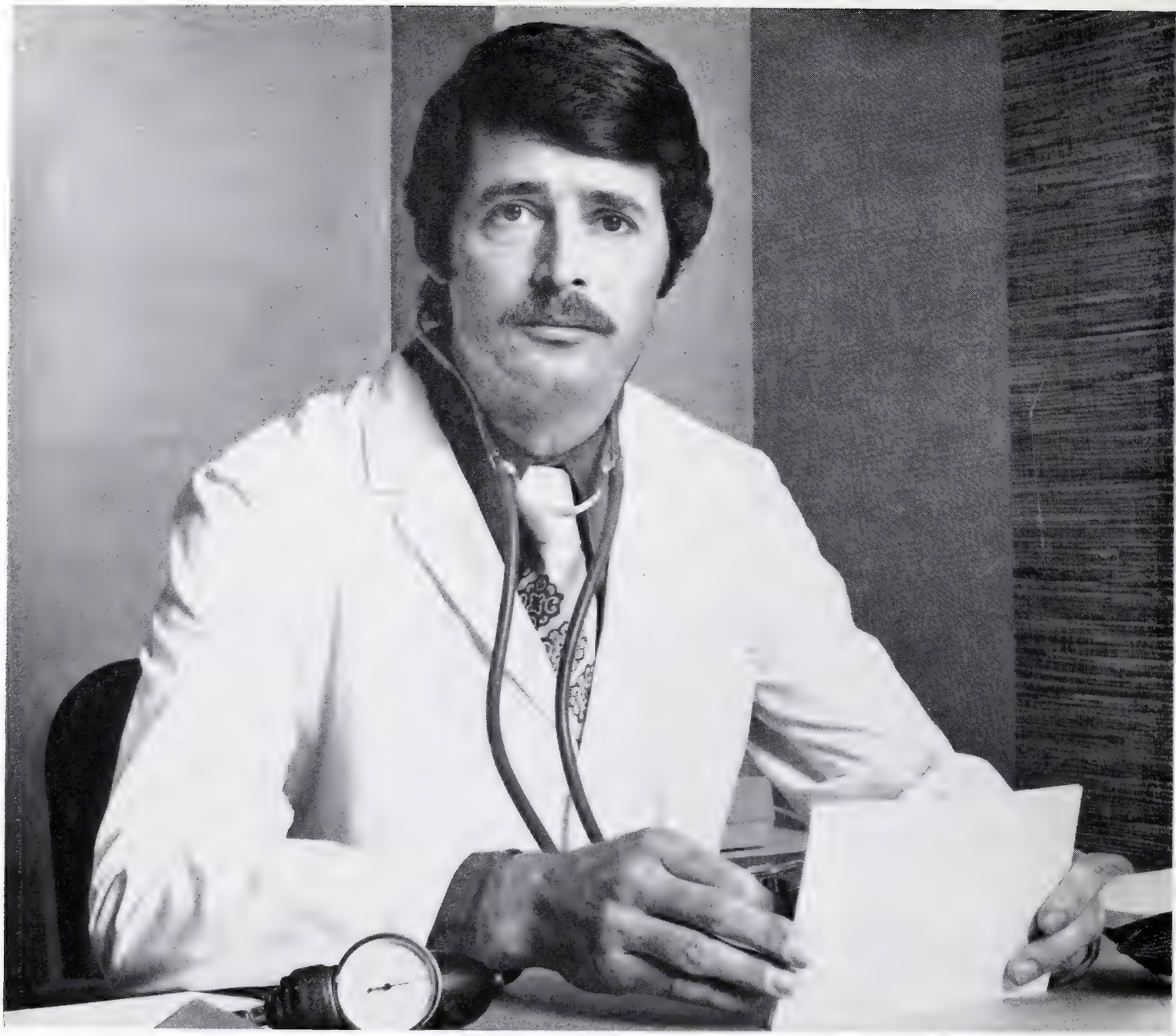

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And, being in the medical profession, you know how important it is to provide your people with the best coverage available.

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You might get group health insurance at a lower rate. But when you think of how much your people are worth to you, we think you'll find them worth every nickel that Blue Cross and Blue Shield coverage costs.

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CLEAR THE TRACT

in coughs of colds, "flu" and u.r.i.— clear the tract with the famous Robitussin® Line!

The 5 members of the Robitussin® family all contain the expectorant, guaifenesin, to help clear the lower respiratory tract. Guaifenesin works systemically to help stimulate the output of lower respiratory tract fluid. This enhanced flow of less viscid secretions promotes ciliary action and makes thick, inspissated mucus less viscid and easier to raise. As a result, dry, unproductive coughs become more productive and less frequent.

For productive and unproductive coughs

Robitussin®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 100 mg
Alcohol, 3.5%

For severe coughs

Robitussin A-C®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 100 mg
Codeine Phosphate, USP ..... 10.0 mg
(warning: may be habit forming)
Alcohol, 3.5%

Non narcotic for 6-8-hour cough control

Robitussin-DM®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 100 mg
Dextromethorphan
Hydrobromide, NF ..... 15 mg
Alcohol, 1.4%

Decongests nasal passages and sinus openings as it helps relieve coughs

Robitussin-PE®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 100 mg
Pseudoephedrine
Hydrochloride, NF ..... 30 mg
Alcohol, 1.4%

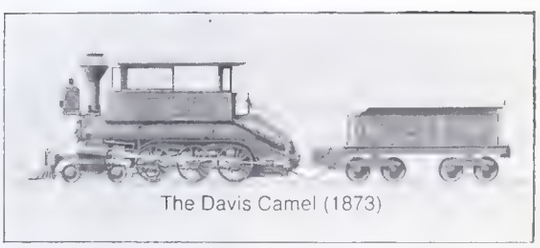
Decongestant action helps control cough and clear stuffy noses and sinuses. Non narcotic.

Robitussin-CF®

Each 5 ml teaspoonful contains:
Guaifenesin, NF ..... 50 mg
Phenylpropanolamine
Hydrochloride, NF ..... 12.5 mg
Dextromethorphan
Hydrobromide, NF ..... 10 mg
Alcohol, 1.4%

All Robitussin formulations available on your Rx or Recommendation.

For many years Robins has spotlighted the expectorant action of the Robitussin cough formulations by featuring action photographs of steam engines like the one on the preceding page. In keeping with this tradition, last year the company commissioned a well-known illustrator to render full-color drawings of several classic locomotives . . . accurate to the minutest detail. Chances are you requested and received the first locomotive in this series, The William Mason, last winter. Now, the second one is available. (See below). To order your print suitable for framing, write "Robitussin Clear-Tract Engine #2" on your Rx pad and mail to "Vintage Locomotives," Dept. T4, A. H. Robins Company, 1407 Cummings Drive, Richmond, Va. 23220.



The Davis Camel (1873)

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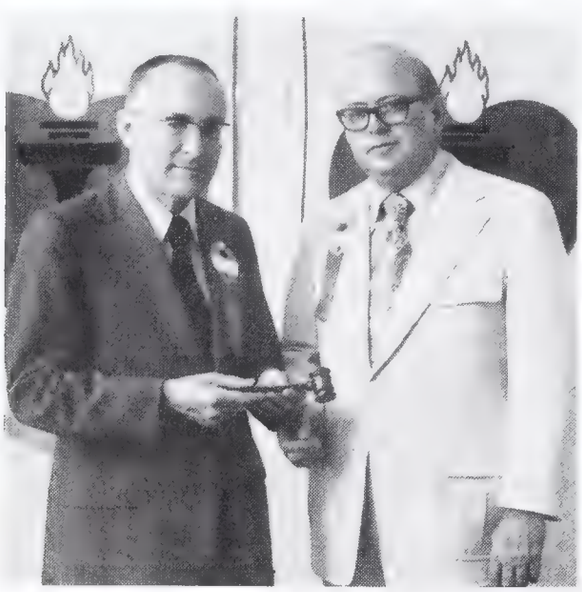
◀ *OUR PHOTO: Norfolk & Western Branch Train No. 202 west bound near Alvarado, Va. (Oct., 1956). This line reaches the highest point of any railroad East of the Rockies (elevation 3,577 ft.) with a minimum grade of 3%. It crosses 108 bridges, some 700 ft. long! Photo by O. Winston Link.*

Medical Newsmakers

The DONALD A. RAPPOPORT Memorial Fund has been established at the University of Texas Medical Branch in Galveston to assist medical and graduate students with special research projects in child health. The fund honors Dr. Rappoport, a medical scientist who for 12 years until his death in 1972 was a faculty member in the department of pediatrics at the Medical Branch. The fund, in the amount of $10,000, will be preserved intact, with only the income utilized for expenditures. Intended to be seed money to encourage and to facilitate the participation of students in research, the fund offers up to $300 per student as a stipend for research. Dr. Rappoport was born in Kharkov, Russia, in 1913, the son of a plumbing supplier. His family escaped the Bolshevist regime. He earned a bachelor's degree at Illinois, then received a master's degree and doctor of philosophy degree in biochemistry at the University of California. He came to Galveston in 1960 as chief of the division of molecular biology.

DR. EDWIN J. MORROW, a Houston physician associated with the Ledbetter Clinic, has been elected president of the American Heart Association, Texas Affiliate, Inc. Dr. Morrow succeeds DR. HENRY C. McGILL JR, of San Antonio.
Other medical officials elected at the affiliate's annual assembly in Houston include: DR. JOSEPH C. OGLE, Dallas, president-elect; DR. A. BRYAN SPIRES, JR, Austin, vice-president; DR. HENRY McINTOSH, Houston, vice-president; and DR. BERNARD H. BLOOM, San Antonio, vice-president.



Dr. Henry C. McGill Jr (left) presents the president's gavel to newly-elected president Dr. Edwin J. Morrow.

DR. MAJOR W. BRADSHAW, assistant professor of medicine, microbiology and immunology at Baylor College of Medicine, and DR. CLAIR HUCKINS, associate professor of cell biology at Baylor College of Medicine, have been appointed to new administrative posts in the office of student affairs. Dr. Bradshaw, who was graduated from the Baylor College of Medicine, will be responsible for the coordination of the educational program for medical students, including coordination of standing college committees on curriculum, student affairs and student promotions. Dr. Bradshaw taught at Baylor as a graduate student and as a fellow before joining the faculty in 1972. He was a clinical associate at the National Institutes of Health and a clinical fellow at the Methodist Hospital after an internship and residency with the Osler Medical Service, Johns Hopkins Hospital. Dr. Huckins, who holds a bachelor's, master's and doctor of philosophy from McGill University, Montreal, will be responsible for counseling and advising students, particularly those enrolled in the first-year class whose curriculum is devoted principally to the basic sciences. She held academic appointments in anatomy at McGill and Tufts and has been a Ford fellow at the Worcester Foundation for Experimental Biology and a visiting scientist at the Oak Ridge National Laboratories.

Jefferson Keith (left), chairman of the board of the American Society of Association Executives, presents C. Lincoln Williston, executive director of the Texas Medical Association, a certificate naming Williston a Certified Association Executive.

C. LINCOLN WILLISTON, executive director of the Texas Medical Association, has been named a Certified Association Executive by the American Society of Association Executives. He was one of 72 association executives approved by ASAE's Certification Board and ratified by its board of directors. To qualify for CAE certification Williston completed a personal data form listing his professional experience and successfully passed an examination covering association management subjects including law, education and statistics. ASAE, "the association of associations," includes more than 6,000 members who manage the nation's voluntary membership associations and societies.

Winners of annual Medical Journalism Awards were honored by Sandoz Pharmaceuticals at the American Association of Medical Society Executives meeting in Dallas. Featured were SIDNEY GIMPEL, director of scientific relations of Sandoz; JAMES HICKOX, executive director of the Harris County Medical Society and ROBERT ELSNER, president of AAMSE. The *Harris County Physician* is published in Houston by the county medical society.

Sidney Gimpel (left) director of scientific relations of Sandoz Pharmaceuticals, presents a Medical Journalism Award to James Hickox (center) executive director of the Harris County Medical Society. At right is Robert Elsner, president of the American Association of Medical Society Executives.

An acting chairman of the department of radiology at Baylor College of Medicine and chief of radiology at Methodist Hospital has been named. DR. JAMES E. HARRELL, who came to Methodist in 1972, will replace Dr. Robert S. MacIntyre who died of a heart attack in August 1976. Prior to his move to Houston, Harrell served as chief of cardiovascular radiology and chief of diagnostic radiology at Walter Reed General Hospital. He has specialized in vascular radiology since 1966 when he did a fellowship in angiography at Walter Reed. The graduate of the University of Arkansas Medical School has been involved primarily in neuroradiologic diagnostic procedures since coming to Methodist.

"There are no known complications of the procedure. It has never been done before."

MEDICINE AND THE LAW

TEXAS COURT HOLDS CERTAIN RESTRICTIVE COVENANTS IN A CONTRACT UNREASONABLE AND INVALID

The following case[1] involves a situation where restrictive covenants in a contract kept the doctor who was an emergency room physician from performing professional services in the same hospital for another contractor after termination of the original contract and kept the hospital from allowing the doctor to work in emergency room for a subsequent contractor. The Texas court held the restrictive covenants in a contract unreasonable and invalid.

Facts

In a recent Texas case a hospital had entered into a contract with a physician contractor to provide or arrange for emergency room services for the hospital. In turn, the physician contractor had entered into a contract with several physicians to provide the emergency room coverage. These physicians agreed not to compete with or provide emergency room services in any hospital within fifty miles for three years after the contract period. The hospital had agreed with the physician contractor not to employ or allow any of the physicians to work in the emergency room for the same time period. Subsequently the hospital did not renew the contract with the physician contractor, but contracted with another group, and refused to allow the complaining physicians to work there because of the previous contract period. These physicians filed suit.

Discussion

The court concluded that the complaining physicians were in the relationship of contractor-subcontractor and the restrictions against competition could not be applied beyond the term which the subcontractor agreed to render exclusive service. In upholding the lower court's decision, the court found the restrictions unreasonable. The court considered the fact that the failure to renew the contract was the result of dissatisfaction with the physician contractor rather than the physicians who were performing emergency room service. The court further held that the burden was on the contracting physician to establish the existence of facts to support the legal conclusion that the restrictions were reasonable. Addressing the restriction on the hospital from hiring a physician who was under such a contract, the court said that the absence of facts making the so-called customer contact theory applicable or showing a breach of trust or confidence arising from improper use of the contracting physician's trade secrets, customer list etc., enforcement of the contracting physician hospital covenant would only have the effect of insulating the contracting physician against competition by the subsequent contractor. Fundamentally, a restrictive covenant is enforced if it is reasonable in three basic regards. The restraint of the employee must be reasonable in the sense that it is no greater than is necessary to protect the employer in some legitimate interest. An important reason for enforcing the covenant is that the employee, during his period of employment, may have the opportunity to come in contact with a customer of the employer or in the case of a physician, come in contact with his employer's patient. In the practice of medicine, the employee may be the only contact that the customer or patient has with the employer and, therefore, the patient may look to the employee rather than the employer as the personfication of the business. Realizing this, the courts have developed the so-called customer contact rule which states that where the good will of the customer has attached to the employee and the employee has acquired during his employment a special influence with the customer which gave him an advantage over the employer in competition for the

customer's business, then a restrictive covenant will be enforced against the employee at the termination of his employment. There have been several instances of the customer contact rule being applied in the case of physicians. The access of the employee to trade secrets or confidential information is another important consideration in protecting the interest of the employer. It would not seem that the question of trade secrets or confidential information would be particularly controlling in the case of the physician employees, although the problem of knowledge of customer lists or in this instance, lists of patients, might be brought into play. The second aspect of reasonableness is whether or not the enforcement would be unduly harsh and oppressive on the employee, particularly in the light of its relative benefits to the employer. The court will look closely at the effect that the enforcement of the restraint will have on the employee. If the intended restraint is unduly harsh on the employee, or if it does not benefit the employer particularly, often the courts will not enforce the covenant. The third factor in determining the reasonableness of enforcement is whether the enforcing of the covenant will be unnecessarily injurious to the public as a whole. An important factor for the court to consider is whether there is a shortage of the employee's type of service. It would appear that in these times of dispute concerning the supply of physicians, the argument of physician shortage might be made fairly effectively, at least in certain geographical areas, in opposing the enforcement of the covenant against a physician. The interest of the general public in the enforcement of a restrictive covenant will also be taken into consideration if the court feels that a stifling of competition or the creation of a monopoly may result. Two other factors in determining the reasonableness of a restrictive covenant are the duration of time of the restriction and the geographical area in which the employee is forbidden to practice. These questions of time and area are interwoven with the previously listed tests of reasonableness to the employer, the employee and the general public.

Conclusion

As stated, every case in this field must be decided on its own facts and any one case may involve a number, if not all, of the factors listed. Therefore, it is impossible to say that a particular time limit and a particular area are reasonable or unreasonable, or that in a particular case the time limit and area restrictions were the determining factors in whether or not the covenant was enforced or held invalid. In one particular case the court has had this to say concerning the amount of authority on this particular subject: "This is not one of those questions in which the legal researcher cannot find enough to quench his thirst. To the contrary, there is so much authority, it drowns him. It is a sea vast and vacillating, overlapping and bewildering. One can fish out of it any kind of strange support for anything, if he lives so long." There are arguments to be made both for and against the use of restrictive covenants not to compete in physician employment of subcontractor contracts. In view of the complexity of the field, physicians who desire employment of other physicians or who enter into contracts with them or physicians who desire to become employed and have concern about the contract are encouraged to look carefully at the provisions of the contract and consult a qualified attorney for advice prior to the execution of the contract. Otherwise, the same outcome as the above case may result.

Will Barber, Ace Pickens
Brown, Maroney, Rose, Baker & Barber
TMA Legal Counsel

1. *Hospital Consultants, Inc, et al, vs Potyka, MD, et al,* 531 SW 2d. 657, Texas Court of Civil Appeals, 1975.

Medicine in literature

EDITOR'S NOTE: Beginning in this issue, *Texas Medicine* will carry monthly bibliographies on selected clinical topics of general interest, prepared by the staff of TMA's Memorial Library. This month's topic is swine flu. Copies of these and other articles pertaining to swine flu are available from the Memorial Library.

SWINE FLU

Beare AS, Schild GC, Hall TS, et al: Antigenic characteristics of swine influenza virus closely related to human Hong Kong strain and results of experimental infection in volunteers. *Lancet* 1(7694):305-308, 1971.

Brown P, Gajdusek DC, Morris JA: Virus of the 1918 influenza pandemic era: new evidence about its antigenic character. *Science* 166:117-119, 1969.

Denny FW, Glezen WP, Karzon D, et al: Swine-like influenza virus and vaccine. *Am J Dis Child* 130:583, 1976.

Do we need a 'Spanish flu' vaccine? Epidemiologists face a hard choice as more virus isolates are reported. *Med World News* 17(6):28-29, 1976.

Francis T Jr: Epidemic influenza: immunization and control. *Med Clin North Am* 51(3):781-790, 1967.

Iowa swine-like influenza immunization plan. *J Iowa Med Soc* 66(6):203-205, 1976.

It's 'go' for the flu vaccine program. *Med World News* 17(15):6, 1976.

Marks RG (ed): The swine vaccine; 1. Why you must give it, 2. Why you will be liable, 3. Why it may be needless. *Current Prescribing* 2(8)11+, 1976.

Pandemic and interpandemic influenza A. *Br Med J* 1(6012):730-731, 1976.

Petty R: Sea of skepticism fails to halt plans for flu vaccination drive. *Am Med News*: 1, 1976.

Schnurrenberger PR, Woods GT, Martin RJ: Serologic evidence of human infection with swine influenza virus. *Am Rev Respir Dis* 102:356-361, 1970.

Schonberger L: The influenza immunization campaign, 1976. *Md State Med J* 25(7):44-45, 1976.

Seal JR, Sencer DJ, Meyer HM Jr: A status report on national immunization against influenza. *J Infect Dis* 133(6):715-720, 1976.

Smith TF, Burgert EO Jr, Dowdle WR, et al: Isolation of swine influenza virus from autopsy lung tissue of man. *N Engl J Med* 294(13):708-710, 1976.

Stuart-Harris CH: Virus of the 1918 influenza pandemic. *Nature* 225:850-851, 1970.

Swine influenza vaccine. *Med Lett Drugs Ther* 18(15):61-62, 1976.

Weinstein L: Influenza — 1918, a revisit? *N Engl J Med* 294(19):1058-1060, 1976.

Yuncker B: Ford's flu shot campaign; how safe? How necessary? NY Post: magazine pp. 3-4, 24 Apr 76.

IN THE TMA LIBRARY

American Medical Association: *Report on 1975 AMA Membership Opinion Survey, A Report of the Committee on Membership Opinion Polls of the AMA House of Delegates*. June, 1975.

American Medical Association Joint Committee on Injury Scaling, American Association for Automotive Medicine, Society of Automotive Engineers: *The Abbreviated Injury Scale* (1976 Revision). Morton Grove, Ill, American Association for Automotive Medicine, 1976.

House-Senate Health Care Study, Texas State Legislature: *Reaction to Crisis: A State by State Review by Medical Malpractice Legislation Enacted in 1975.*

Hospital Accreditation Program, Joint Commission on Accreditation of Hospitals: *Accreditation Manual for Hospitals* (ed 1976).

Law D: *A Guide to Alternative Medicine.* Garden City, NY, Dolphin Books, Doubleday & Co, Inc, 1976.

Texas Dietetic Association: *Texas Dietetic Association Diet Manual* (ed 2).

Texas Medical Professional Liability Study Commission: *Medical Quality and Patient Outcomes: Malpractice in Perspective.*

The United States Pharmacopeia (ed 19). The US Pharmacopeial Convention, Inc, 1974.

"Where is the GI bleeder you called about?"

RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

A.J. BANKHEAD
Tyler, 1917-1976

D.T. BUNDY
Austin, 1876-1976

A.R. HANCOCK
Gladewater, 1891-1976

J.J. MUIRHEAD
Vernon, 1906-1976

W.M. PRATT
Houston, 1895-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

Contributions to the Texas Medical Memorial Library Fund are invested in a permanent fund and are managed by the Board of Trustees of the Texas Medical Association. Dividends are used to purchase new books and to operate the Library.

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Recent deaths

Dr. A. J. Bankhead

Dr. Alexander Jackson Bankhead, a Tyler psychiatrist, died March 30, 1976, at the age of 59.

Dr. Bankhead, a native of Weatherford, Tex, attended Tyler Junior College before entering The University of Texas. He received his BA degree in 1937, and entered UT Medical Branch, Galveston. He completed his MD in 1940.

He was an intern at Binghampton State Hospital, Binghampton, NY, from 1940 to 1942. Following service in the US Navy from 1942 to 1947, Dr. Bankhead entered a residency program at John Sealy Hospital, Galveston. He completed his residency in 1949. He was involved in postgraduate studies at Presbyterian Hospital (affiliated with Columbia University), New York, in 1950. He began his practice in Tyler that same year.

Dr. Bankhead was a member of the American Medical Association, American Psychiatric Association, Smith County Medical Society, and Central Neuropsychiatric Society.

He also was a past president of both the Texas District Branch of the American Psychiatric Association and the Titus Harris Society, and a past secretary of the Texas Society for Mental Health.

Surviving are his wife, Jane Burr Bankhead of Tyler; five daughters, Sara Shepherd and Judy Bankhead of San Antonio, and Jenny Bankhead, Kathy Bankhead, and Molly Bankhead of Tyler; and a brother, Frederick Bankhead of Weatherford.

Dr. D. T. Bundy

Dr. David Thomas Bundy, who had been an honorary member of Texas Medical Association since 1953, died March 19, 1976. The doctor, 99 years of age, died at his Austin residence after a short illness.

Dr. Bundy began his practice in Smith County, Texas, in 1907. He became the county's public health officer in 1936. In 1962, he resigned from this position, and moved to Austin seven years later.

The native of Lindale, Tex, was graduated from Texas Christian University School of Medicine in 1907. His professional memberships included the Smith County Medical Society and American Medical Association.

His other memberships were in the Pleasant Retreat Methodist Church and Woodmen of the World. Additionally, he was the recipient of several alumni awards from Texas Christian University.

Dr. Bundy is survived by one son, Farland Bundy of Austin; one daughter, Mrs. Walter Jackson of Grand Prairie; four grandchildren and two great-grandchildren.

Dr. Bankhead

Dr. Bundy

Dr. Hancock

Dr. A. R. Hancock

Dr. Allison Roy Hancock of Gladewater died March 16, 1976, after a long illness. Dr. Hancock, 85, retired in 1973. He had practiced in Gladewater since 1931.

He was graduated from the University of Florida, in his home state, in 1915, and received his medical degree from the University of Oklahoma School of Medicine in 1919. Dr. Hancock was a member of both schools' football teams.

Dr. Hancock's internship was at the University of Oklahoma Hospitals in Oklahoma City. He also did postgraduate work at The University of Texas.

Dr. Hancock practiced in Walters, Tonkawa, and Seminole, Okla, before moving to Gladewater, where he was active in civic, as well as medical, pursuits. He was one of the founders of the Gladewater Country Club, and served on the Gregg County Draft Board for 20 years. He also was city health officer, was involved in the plans

Dr. Muirhead

Dr. Pratt

for building a local school, and owned and operated a private hospital in Gladewater for 19 years.

Dr. Hancock was a past president of the Gregg County Medical Society and a member of the American Medical Association. He was a lifetime member of the Masonic Lodge at Tonkawa, Okla, the Scottish Rite Consistory at Guthrie, Okla, and Shrine Temple at Oklahoma City.

Surviving are Dr. Hancock's wife, Gladys Thompson Hancock, Gladewater; a sister, Mrs. Connie Vickery, Pensacola, Fla; and a number of nieces and nephews.

Dr. J. J. Muirhead

Dr. James Jarrell Muirhead died Jan 23, 1976, in Vernon, Tex.

Dr. Muirhead, 69, retired from his practice in 1974. He had lived in Vernon since 1935.

The native of Shreveport, La, received his bachelor of arts degree from Baylor University, Waco, and his medical degree from Baylor University College of Medicine, Dallas, in 1932.

Dr. Muirhead served for 40 months during World War II in the US Army Air Corps as a flight surgeon. He was separated from the service with the rank of major.

The doctor was a past secretary (1939) and president (1949-1950) of the Wilbarger County Medical Society. He was an honorary member of Texas Medical Association and had been a member of the American Academy of Family Physicians.

Dr. Muirhead was president of the Red River Valley Museum, a past president of the Vernon School Board and had been a trustee of Howard Payne College. He was a Mason, Shriner and Rotarian, and also was a director of the Vernon Savings and Loan Association.

Surviving are Dr. Muirhead's wife, Ilda Edwards Muirhead, Vernon; two daughters, Eleanor Muirhead Bolton, Dallas, and Betty Muirhead Prince, Palestine, Tex; three brothers, Dr. S. J. Muirhead, Temple, Dr. E. E. Muirhead, Memphis, and Harry Muirhead, Vernon; and three sisters, Mrs. Warren Adams, Waco, Mrs. Dulce Brooks, Dallas, and Mrs. Bessie Estes, Flagler Beach, Fla.

Dr. W. M. Pratt

Dr. Willard Munson Pratt, 80, of Houston died April 21, 1976. Dr. Pratt, who retired in 1975, had lived in Texas since 1928.

The family physician was a native of Enid, Okla. He was graduated from the University of Nebraska, Lincoln, in 1921. In 1923, he completed his MD at the University of Nebraska College of Medicine, Omaha. His internship was at the Wise Memorial Hospital, Omaha.

The doctor was a veteran of the military service. His professional memberships included the Harris County Medical Society, American Medical Association and American Academy of Family Physicians.

Surviving Dr. Pratt are his wife, Dr. Helen Pratt, Houston; daughters, Jan McCarty, Amarillo, and Judy Reynolds, Fort Worth; sons, Willard Roland Pratt and Wayne Munson Pratt, both of Houston; sister, Mrs. C. R. Dickson, Grosse Pointe Farms, Mich; and six grandchildren.

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If your organization will have one or more continuing education programs during the coming year, you will want them listed. This directory will provide greater publicity to all courses which will be offered in Texas and stimulate greater participation in many programs.

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Contraindications: Acute intermittent porphyria and allergic or idiosyncratic reactions to carisoprodol or related compounds such as meprobamate, mebutamate, tybamate.
Warnings: *Idiosyncratic Reactions:* Rarely, extreme weakness, transient quadriplegia, dizziness, ataxia, temporary vision loss, diplopia, mydriasis, dysarthria, agitation, euphoria, confusion and disorientation have appeared within minutes or hours of the first dose. These usually subside in several hours but supportive and symptomatic therapy, including hospitalization, may be necessary.
Pregnancy and Lactation: Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers (concentrations in breast milk are two to four times that in plasma), or women of childbearing potential.
Children Under Twelve: Not recommended.
Potentially Hazardous Tasks: Driving a motor vehicle or operating machinery.
Additive Effects: Effects of carisoprodol and alcohol, other CNS depressants or psychotropic drugs may be additive.
Drug Dependence: Use cautiously in addiction-prone patients.
Precautions: To avoid excess accumulation, use caution in patients with compromised liver or kidney function.
Adverse Reactions: *Central Nervous System:* Drowsiness, dizziness, vertigo, ataxia, tremor, agitation, irritability, headache, depressive reactions, syncope, insomnia, idiosyncratic reaction (see "Warnings").
Allergic or Idiosyncratic: In previously unexposed patients, these are usually seen after 1-4 doses and include rash, erythema multiforme, pruritus, eosinophilia, fixed drug eruption with cross reaction to meprobamate. Asthmatic episodes, fever, weakness, dizziness, angioneurotic edema, smarting eyes, hypotension and anaphylactoid shock may be manifestations of severe reactions. In such cases, stop carisoprodol and initiate appropriate treatment (e.g., epinephrine, antihistamines, corticosteroids).
Cardiovascular: Tachycardia, postural hypotension, facial flushing.
Gastrointestinal: Nausea, vomiting, hiccup, epigastric distress.
Hematologic: Leukopenia and pancytopenia (on carisoprodol plus other drugs).
Usual Adult Dosage: One 350 mg tablet three times daily and at bedtime.
Overdosage: Has produced stupor, coma, shock, respiratory depression, and, very rarely, death. The effects of an overdosage of carisoprodol and alcohol or other CNS depressants or psychotropic agents can be additive even when one of the drugs has been taken in the usual recommended dosage. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Carisoprodol is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully with related drug meprobamate. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

Before prescribing, consult package circular or latest PDR information.

1. Hindle, T.H. III: Calif. Med. *117:7* (Aug.) 1972. 2,3. Unpublished Data on file, Medical Department, Wallace Laboratories, Cranbury, N.J.

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American Medical Association's 30th Clinical Convention • Scientific Program
December 4-7, 1976/Philadelphia Civic Center, Philadelphia, Pa.

AMA's 30th Clinical Convention • December 4-7, 1976 • Philadelphia Civic Center

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535 North Dearborn Street
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General Registration

_____ AMA members and their guests: no fee
_____ Non-member physicians: $35
_____ Guests of non-members: $10 per person
_____ Medical students, interns, residents, Canadian, and foreign physicians: no fee

Does not include CME Course, Sessions, or Luncheons Fees.

I am a member of the AMA through the following State Medical Association or government service

_____.

If not, I have added $35 non-member fee to my course registration remittance of $_____, which is enclosed in the form of a check or money order payable to the American Medical Association. I understand payment must accompany my choice of course(s) on this registration coupon.

Confirmation of my selection(s) will be mailed to me according to the deadlines itemized. Please send AMA's Philadelphia Clinical Convention Brochure ☐.

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Course Code	Credit Hours	Fees	Number of Preferences Sat.	Sun.	Mon.	Tue.
S-1.	5	$ 50	____			
S-2.	6	60	____			
S-3.	6	60	____			
S-4.	6	60	____			
S-5.	3	30	____			
S-6.	3	30	____			
S-7.	5	50	____			
S-8.	3	30	____			
S-9.	3	30	____			
S-10	3	30	____			
S-11.	11	130	_____			
S-12.	6	60	_____			
S-13.	6	60	_____			
S-14.	6	60	_____			
S-15.	6	60	_____			
S-16.	6	60	_____			
S-17.	3	30		____		
S-18.	3	30		____		
S-19.	3	30		____		
S-20.	3	30		____		
S-21.	3	30		____		
S-22.	3	30		____		
S-23.	12	120		____	_____	
S-24.	6	60		_____		
S-25.	6	60		_____		
S-26.	3	30			____	
S-27.	3	30			____	
S-28.	3	30			____	
S-29.	3	30			____	
S-30.	3	30			____	
S-31.	3	30			____	
S-32.	6	60			_____	
S-33.	6	60			_____	
S-34.	6	60			_____	
S-35.	6	60			_____	
S-36.	6	60			_____	
S-37.	5	50				____
S-38.	3	30				____
~~S-39.~~	~~3~~	~~30~~				~~____~~
S-40.	3	30				____
S-41.	3	30				____
S-42.	3	30				____
S-43.	5	50				____
S-44.	3	30				____
~~S-45.~~	~~3~~	~~30~~				~~____~~
S-46.	3	30				____

Add $35 if Non-AMA Member ..... _____

TOTAL ..... _____

Special Note • In addition to the postgraduate courses outlined here, the Oct. 11, 1976, **JAMA** Convention Issue contains 9 general sessions, 16 luncheon sessions, and 32 "Meet the Professor" meetings available to you. The AMA's Philadelphia Clinical Convention Brochure also contains this information. All inquiries should be directed to the **AMA Department of Meeting Services, 535 N. Dearborn St., Chicago, IL 60610** and or direct phone inquiries to: **AMA Department of Meeting Services at (312) 751-6187.**

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The Bicentennial City • It is particularly appropriate in this Bicentennial Year that Philadelphia be the site of AMA's 30th Clinical Convention. Because Philadelphia is not only the birthplace of our Nation, but it can also lay legitimate claim to being the cradle of American medicine. It is the site of the first hospital, the first medical school, and the home of many famous American Colonial physicians, such as Benjamin Rush, John Shippen, and John Morgan.

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If the minimum course registration is not attained for your first choice, or if the course is full, one of your alternate choices will be substituted. It is best to register early because the class sizes are limited. All medical students, interns, and residents are entitled to a 50% discount on postgraduate course fees ($10 per Category 1 credit hour is standard rate).

Postgraduate Courses

Saturday, Dec. 4, 1976

7:30 AM-Noon (5 hours: $50)
- *S-1. Basic Life Support (Cardiopulmonary Resuscitation—CPR)

9:00 AM-5:30 PM (6 hours: $60)
- S-2. Practice Management Seminar
- S-3. Writing for Scientific Journals
- *S-4. Nutrition: Parenteral & Alimentary

9:00 AM-Noon (3 hours: $30 each)
- *S-5. Basic Electrocardiography
- S-6. Evaluation of the Dizzy Patient

1:00-5:30 PM (5 hours: $50)
- S-7. Basic Life Support (CPR)

2:30-5:30 PM (3 hours: $30 each)
- S-8. Hematologic Disorders in Children
- S-9. The Eye & Office Practice
- S-10. Coronary Artery Disease: Medical vs Surgical Therapy

Sat., Dec. 4 & Sun., Dec. 5

9:00 AM-5:30 PM & 9:00 AM-Noon (11 hours: $110, plus $20 lab fee = $130)
- S-11. Public Speaking Seminar

9:00 AM-Noon & 9:00 AM-Noon (6 hours: $60 each)
- *S-12. Fluid & Electrolyte Therapy
- S-13. Diseases of the Bowel
- S-14. Arthritis Update: Medical & Surgical Management

2:30-5:30 PM & 2:30-5:30 PM (6 hours: $60 each)
- *S-15. Management of Diabetes Mellitus
- S-16. Hypertension

Sunday, Dec. 5, 1976

9:00 AM-Noon (3 hours: $30 each)
- S-17. Diagnosis & Treatment of Fractures of the Upper Extremities
- *S-18. Advanced Electrocardiography
- S-19. Emergency Medicine

2:30-5:30 PM (3 hours: $30 each)
- *S-20. Pulmonary Function & Blood Gases
- S-21. Behavioral Problems Involving Children & Adolescents
- S-22. Recent Advances in Cancer Surgery

Sun., Dec. 5 & Mon., Dec. 6

7:30 AM-5:30 PM & 7:30 AM-Noon (12 hours: $120)
- S-23. Advanced Life Support (CPR)

9:00 AM-Noon & 9:00 AM-Noon (6 hours: $60)
- S-24. Jaundice: Diagnosis, Treatment & Management

2:30-5:30 PM & 9:00 AM-Noon (6 hours: $60)
- S-25. Everything You Want to Know About New Diagnostic Techniques: Scoping, Scanning, & Angiography

Monday, Dec. 6, 1976

9:00 AM-Noon (3 hours: $30 each)
- S-26. Diagnosis & Treatment of Fractures of the Lower Extremities
- S-27. Neonatology
- S-28. Current Controversies in Gynecology

2:30-5:30 PM (3 hours: $30 each)
- S-29. Basic Electrocardiography
- S-30. Pulmonary Function & Blood Gases
- *S-31. Complications of Psychotropic Drugs

Mon., Dec. 6 & Tues., Dec. 7

9:00 AM-Noon & 9:00 AM-Noon (6 hours: $60 each)
- S-32. Immunology 1976
- S-33. Thromboembolism: Prevention, Diagnosis, & Treatment

2:30-5:30 PM & 2:30-5:30 PM (6 hours: $60 each)
- S-34. Fluid & Electrolyte Therapy
- S-35. Nutrition: Parenteral & Alimentary
- S-36. Management of Diabetes Mellitus

Tuesday, Dec. 7, 1976

7:30 AM-Noon (5 hours: $50)
- S-37. Basic Life Support (CPR)

9:00 AM-Noon (3 hours: $30 each)
- S-38. Diagnosis & Treatment of Fractures in Children
- ~~*S-39. Dermatology for the Nondermatologist~~
- S-40. Allergic Emergencies
- S-41. Medical Problems in Long-Term Care
- S-42. Acute Hand Problems

1:00-5:30 PM (5 hours: $50)
- S-43. Basic Life Support (CPR)

2:30-5:30 PM (3 hours: $30 each)
- S-44. Advanced Electrocardiography
- ~~S-45. Dermatology for the Nondermatologist~~
- S-46. Complications of Psychotropic Drugs

*Course repeated. See course list for dates & times.

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Key #	Hotel/Motel	Single	Double	Twin	Suite
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2.	Hilton of Philadelphia	30.00-40.00	40.00-50.00	40.00-50.00	110.00-190.00 (1 Bedroom) 160.00-250.00 (2 Bedrooms)
3.	**Holiday Inn — Center City**	**CO-HEADQUARTERS HOTEL**			**NO ROOMS AVAILABLE**
4.	Penn Center Inn	25.00-27.00	30.00-32.00	30.00-32.00	60.00 (1 Bedroom) 90.00 (2 Bedrooms)
5.	**Philadelphia Sheraton**	**HEADQUARTERS HOTEL**			**NO ROOMS AVAILABLE**
6.	University City-Holiday Inn	29.00	36.00	36.00	95.00-105.00 (1 Bedroom)
7.	Warwick Hotel	32.00-38.00	38.00-44.00	38.00-44.00	75.00-100.00 (1 Bedroom) 100.00-150.00 (2 Bedrooms)

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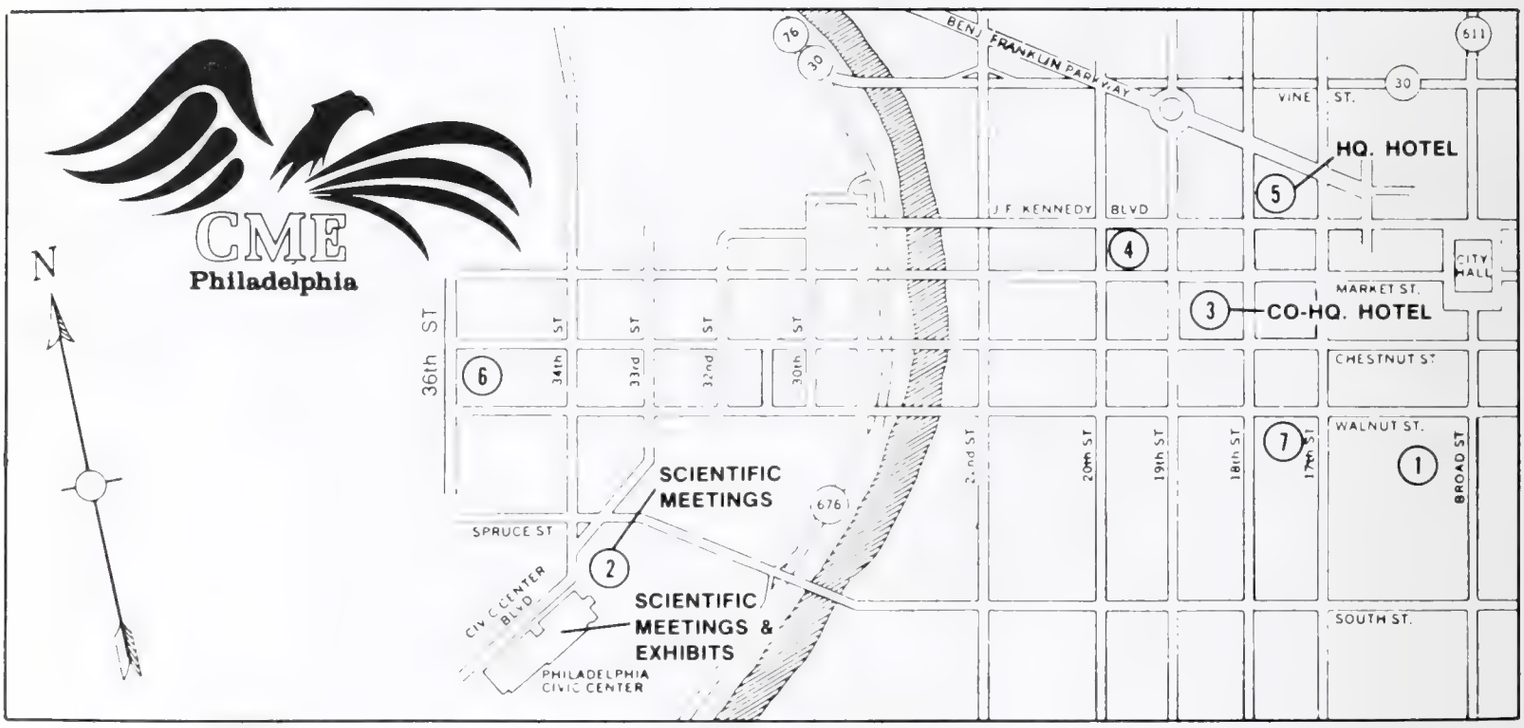

American Medical Association's 1976
Philadelphia Clinical Convention

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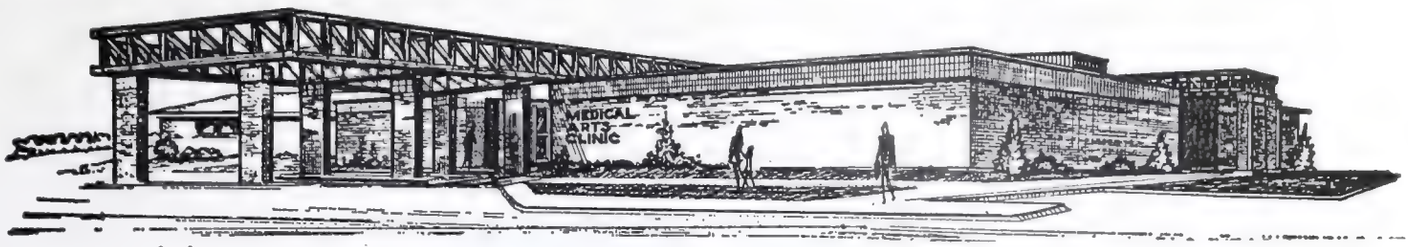

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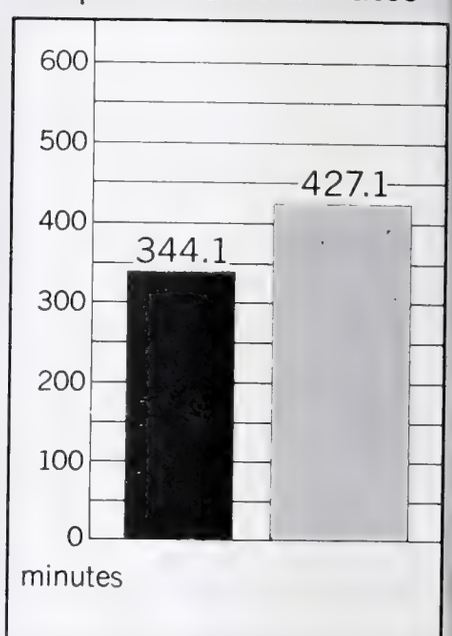
Average increase in total sleep time: 83.0 minutes



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Six elderly insomniac females average age 74, received Dalmane (flurazepam HCl) 15 mg for sever consecutive nights in the sleep research laboratory of a major uni versity medical center in Texas. Every patient improved clinically in the two insomnia parameters shown above, and also spent less time awake after sleep onset. The greater the degree of insomnia any patient experienced before Dalmane, the greater the improve ment with Dalmane. Efficacy was undiminished over the entire medication period.

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Morning "hang-over" has been
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■ Pretreatment

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(flurazepam HCl)
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Before prescribing Dalmane (flurazepam HCl), please consult complete product information, a summary of which follows:
Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; and in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.
Contraindications: Known hypersensitivity to flurazepam HCl.
Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. Caution against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Use in women who are or may become pregnant only when potential benefits have been weighed against possible hazards. Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.
Precautions: In elderly and debilitated, initial dosage should be limited to 15 mg to preclude oversedation, dizziness and/or ataxia. If combined with other drugs having hypnotic or CNS-depressant effects, consider potential additive effects. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.
Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported were headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase. Paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, have also been reported in rare instances.
Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.
Supplied: Capsules containing 15 mg or 30 mg flurazepam HCl.

References:
1. Frost JD Jr: Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
2. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ
3. Robinson DS, Amidon EL: Interaction of benzodiazepines with warfarin in man, in *The Benzodiazepines*, edited by Garattini S, Mussini E, Randall LO. New York, Raven Press, 1973, p. 641

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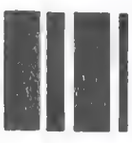

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FAMILY PRACTICE OR OPHTHALMOLOGIST. Attractive office in ideal location with excellent public exposure on corner with easy access. 1370 square feet at 30c per square foot per month in an underserved middleclass area of Irving. Formerly occupied by internist. Contact Litt Perry, DDS, 209 South O'Conner, Irving, Texas 75060; 214-259-4580.

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WANTED: PEDIATRICIAN to join a multispecialty group with two board pediatricians. Guaranteed salary $30,000 plus many fringe benefits. Contact F. L. Phillips, M.D., Glen Valley Clinic, 7630 Bellfort, Houston, Texas 77061.

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PHYSICIANS WANTED: Rapidly growing town of Pearsall, Texas, 55 miles south of San Antonio, needs GP/Surgeons. Large oil deposits recently discovered. Splendid opportunity! New furnished office available next to hospital, terms negotiable. Call collect or write: Phillip Degelia, Frio Hospital, 320 Berry Ranch Road, Pearsall, Texas 78061; 512-334-3617.

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PHYSICIAN NEEDED IN COMMUNITY 45 miles south of Dallas on I-35. New clinic with 3,300 square feet. Population 1,400—large trade area. 20 minutes to one hospital; 30 minutes to another. Contact Box 160, Italy, Texas 76651 or call 214-483-6331.

PSYCHIATRIST FOR ESTABLISHED West Texas MHMR Center. Provide clinical leadership and training in programs emphasizing outpatient services. Excellent professional and paraprofessional staff. MH facility construction in 1977. Exceptional public schools and state university. Call or write James Young, 244 N. Magdalen, San Angelo, Texas 76901; 915-655-5674.

WANTED: BOARD CERTIFIED OR ELIGIBLE OBSTETRICIAN-GYNECOLOGIST to join multispecialty clinic in Houston. Starting salary competitive, early partnership available. Contact Business Manager, Glen Valley Clinic, 7640 Bellfort, Houston, Texas 77061; 644-3344.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

PEDIATRICS—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

EMERGENCY MEDICINE CAREER OPPORTUNITY—for physician wanting full-time long term 2nd career. Trauma center for Central Texas. Ideal weather and location. Starting salary $42,000 plus excellent benefits. Immediate openings. For more info send CV to CTMF, P.O. Box 13023, Austin, Texas 78711.

HAVE A DOCTOR SHORTAGE? (Maybe we can help) The Rural Doctors Group, Inc., A Physician Search/Placement Service, First Federal Plaza, Suite 507, Dept. T-M, 200 East 10th Street (at Brazos), Austin, Texas 78701; telephone 512-476-7129.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77036.

WANTED: OPHTHALMOLOGIST with retinal training to share excellent facilities with two other eye men. Near Gulf Coast, 90 miles from Houston. Unopposed in industrial area with over 125,000 population. Please reply to Ad-642, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

GENERAL PRACTICE OR PSYCHIATRIST—for vacancy in Central Plains MHMR Center—a better than average place to practice medicine. Salary $35,000 to $40,000 plus benefits and liability. Texas license or reciprocity required. Contact Roy Alexander, 2700 Yonkers, Plainview, Texas 79072; 806-296-2726. An equal opportunity, affirmative action employer.

CORPUS CHRISTI, TEXAS: October 1st opening for one full-time MD to complete five-man ED team, 500 bed JCAH approved teaching hospital in Corpus Christi, a town of 225,000 in South Texas. Wanted—settled physician over 40 who has been in private practice, minimal surgical background. Guaranteed $55,000 and a 7% annual increase. 40 hour work week. Fringe benefits include one month paid vacation and time for post graduate study. Contact: Mrs. Sarah Welch, Vice President for Nursing Services, Memorial Medical Center, P.O. Box 5280, Corpus Christi, Texas 78405. Telephone 512-884-4511.

FAMILY PRACTITIONER WANTED TO ASSOCIATE with well established solo practitioner to handle patient overflow. Alternate weekend coverage, etc. Space available, reasonable. X-ray and full lab in building. Desire experienced FP with holistic approach. No hospital practice necessary. Please reply to Ad-652, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436.

OPENINGS FOR TWO EMERGENCY PHYSICIANS in community of 70,000 in West Central Texas. Excellent medical staff and administrative support. Usual schedule is 15-12 hour shifts per month. Fee-for-service with $48,000 annual guarantee. Fine hunting and fishing area. Contact Bill Bass, M.D., 1506 S. Concho Drive, San Angelo, Texas 76901 or call 915-653-6741.

FAMILY PRACTICE/GENERAL PRACTICE—Excellent private practice opportunity exists in northeast Dallas bedroom community of 80,000 in affiliation with new full service 106-bed private hospital. Liberal salary guarantees, interview trip and relocation expenses are offered. Residents enjoy excellent recreational facilities, superior public schools, and a wide range of housing. Send detailed Curriculum Vitae to Ad-629, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEEDED: PHYSICIANS to practice at Mexia State School, located in central Texas just 30 minutes east of Waco. Many fringe benefits—retirement, sick leave, vacation, 40-hour week, group insurance. Salary range $34,300 to $37,300, depending on qualifications. An equal opportunity employer. Contact Medical Director, Mexia State School, P.O. Box 1132, Mexia, Texas 76667. 817-562-2821.

DALLAS METROPLEX. Immediate opening for full time, experienced emergency room physician. Flexible shifts. Competitive remuneration. Contact Dr. R. Murchison, 6350 LBJ Freeway, Suite 282, Dallas, Texas 75240. 214-233-9088.

WANTED: SPANISH SPEAKING GENERAL PRACTITIONER to share busy work load; family, general, industrial medicine. No OB or surgery. Rotating night calls, $36,000 starting salary, no investment required, liberal professional association fringe benefits. Call collect. H. Pena, M.D., North Main Medical and Surgical Clinic Association, 3301 North Main, Fort Worth, Texas 76106; 817-625-2791.

STUDENT HEALTH SERVICE PHYSICIAN—Beautiful campus, competitive salary and benefits, East Texas recreational area. New clinic in planning. Contact William G. Langston, M.D., P.O. Box 3058, SFA, Nacogdoches, Texas 75691; 713-569-4008.

QUALIFIED FAMILY PRACTITIONER: Well established clinic including lab and x-ray. Join five other GPs in busy office and hospital practice. Located in a dynamic, growing area of Dallas. Many benefits that only group practice can provide. Salary negotiable with subsequent partnership offered. Please reply to Ad-655, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77036.

PHYSICIAN—opening for board eligible or certified internist with interest in pulmonary disease. This position is on the medical staff of this 408-bed center comprised of a hospital, nursing home care unit and domiciliary. Active medicine and surgical service with intensive care unit, respiratory care unit and outpatient treatment. Located in warm climate of Texas, 65 miles from downtown Dallas. Salary based on education, experience and background. Recently enacted legislation provides for special bonus pay in addition to base salary. Paid vacation, sick leave, malpractice, life and health insurance. Reasonable housing available in local community of 8000. Interested physicians please write or call Chief of Staff, Sam Rayburn Memorial Veterans Center, Bonham, Texas 75418; telephone 214-583-2111, ext. 212. Inquiries confidential. An equal opportunity employer.

Situations Wanted

WE PRESENTLY HAVE SEVERAL PHYSICIANS, GPs and specialists on file who wish to practice in Texas on a salary basis, with a view to future partnership. How may we help? Medi-Search (recruiting physicians exclusively), 309 Wichita Title Building, Wichita Falls, Texas; 817-322-5269.

TRYING TO RELOCATE? No charge to the physician. All inquiries kept confidential. The Rural Doctors Group, Inc., A Physician Search/Placement Service, First Federal Plaza, Suite 507, Dept. T-M, 200 East 10th Street (at Brazos), Austin, Texas 78701; telephone 512-476-7129.

SEEKING POSITION—34 year old mature, married, American citizen. Completing residency in major university center in Texas in cardiovascular surgery, desires position or association preferably in Texas. Board certified in general surgery. Please reply to Ad-651, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

HUSBAND AND WIFE, team of board eligible internist with one year of fellowship in cardiology and pediatrician available for practice. Solo, group or salaried position. Contact 713-245-6227 or write to Ad-653, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

ALLERGIST: 32, board certified in pediatrics, in second year university allergy/immunology fellowship. Desires position primarily pediatric allergy. Group, partnership, clinic practice. Available summer 1977. Please reply to Ad-656, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON—Board certified, FACS, FLEX New York, 41, wants to relocate. Prefers Dallas or Houston or vicinity. University trained. Four years of private practice. Desires solo, association, or group practice. Please reply to Ad-657, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

INTERNIST WANTING TO RELOCATE would like to join large group or solo practice in a large metropolitan or university city. Would also consider attachment to a large industry as industrial medical officer, part time or full time. Write Ad-658, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 828-2761, or write P.O. Box 18287, Dallas, Texas 75218.

OPTICAL COMPANY FOR SALE situated in metropolitan area with gross sales in excess of $225,000, incorporated and enjoys established clientele, glasses and contact lenses dispensed from several offices, personnel including management available to continue operations. Principals only please reply to Ad-597 *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

OFFICE SPACE FOR LEASE IN NORTHEAST HOUSTON. 2,268 square feet of office space to accommodate two or three physicians. Predominantly black area with few doctors. Adjacent to pharmacy. Office includes patient waiting room, two reception areas, two doctors offices, lab and x-ray. $200 per month per physician, plus utilities. For additional information contact JoAnne Beakley or Tom Kestler, Beakley Pharmacy, 10811 Homestead at Little York Road, Houston, 77016; phone 358-2031 or 633-2200.

FOR SALE: Due to death of doctor, large established family practice of Dr. J. Edwards Prewett grossing over $100,000 annually. Knowledge of Spanish helpful. FOR LEASE: Long-term lease on clinic building, 2404 South IH 35. Equipment available. Approximately 2,700 sq. ft. including separate dentist's office under lease. Scenic outdoor patio, rock garden, large beautiful trees, plenty parking. Write Mrs. J. Edwards Prewett, 407 Almarion, Austin 78746; or call residence 512-327-0662 or doctors office 512-444-5501.

DEAR DOCTOR: How would you like office space ready-to-go, in an exceptionally progressive small town near the "Big City", but without its pressures and problems? If interested please contact Ad-647, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE, A Brattle Fetal Monitor guaranteed to function at peak efficiency. Write or call Paul L. Stuck, M.D., P.O. Box 265, Winnsboro, Texas 75494; phone 214-342-5646.

OPHTHALMOLOGY PRACTICE FOR SALE. Ten years old. Very busy and productive. Located in professional building one block from main hospital in rich oil West Texas city. Excellent clientele and hospital facilities. Very reasonable terms. Write Ad-654, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE: Bird Mark 10 respirator . . . in excellent condition. Complete on stand. Just plug into 115V . . . $300.00. Phone Baytown, Texas, 713-422-3576.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

DISCRETIONARY FUNDS IDLE? Discover gems as a fascinating investment. "Gems—The Beautiful Investment" lists 10 reasons investors recognize gemstones' potential. "G-TBI" was reviewed by *Lapidary Journal* as "an excellent little book" that "should enlighten many to the possible returns . . . available in the precious gem market." Shrink-wrapped, soft-bound. $5 postpaid. RLK Productions, P.O. Box 12252, Dallas, Texas 75225.

CONSULTANTS IN FINANCING, BANKING AND FINANCIAL MANAGEMENT. Banc-Services Corporation, Thomas G. White, President, 10400 N. Central Expressway, Suite 102, Dallas, Texas 75231; 214-369-3196.

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Editorials

EXPENSE IS A FACTOR IN CHOOSING DRUGS FOR RHEUMATIC DISEASES

The recent introduction of three new "aspirin-like" nonsteroidal anti-inflammatory agents has increased our supply of potentially useful agents for treating rheumatic diseases. Whether one or more will prove to be superior to others, or to the agents already available, will be determined only with use of these compounds for a year or two. All of the newer agents appear to be roughly comparable to aspirin in their anti-inflammatory effect, but they are two to five times as expensive as aspirin on a daily dose basis.

All of the three new agents (Naprosyn, Tolmetin, Nalfon) are completely different chemical compounds and one of them is an analogue of an already existing agent in use. In spite of this different organic chemical structure, they all have antipyretic, analgesic and anti-inflammatory properties similar to those of aspirin. None seems to have any special property which would make it more useful than the others except for the long half-life of naproxen (Naprosyn) which makes twice-a-day dosage possible instead of the four-times-a-day dosage that is usual for most such preparations.

They all seem to bind plasma proteins and therefore can displace other compounds including adrenocortical steroids and warfarin (Coumadin) to varying degrees. Their binding seems to vary in its "tightness," which leads to the possible advantage of one or more not displacing coumarin compounds. Tolectin (Tolmetin) reportedly does not affect prothrombin activity, and hence it is apparently unique among the anti-inflammatory drugs. However, we should be cautious with this drug until a larger number of cases can be studied.

The variable costs of these new agents to the patient is of more than passing interest since there is no significant difference in their overall effectiveness. The chart gives a tabular comparison. Acetaminophen is not included because it has no anti-inflammatory properties, although it is an analgesic.

With most of these preparations, including the older drugs, one should know within eight weeks whether or not they will be effective for a given patient. With many of them four weeks is quite sufficient. No patient should be given a "prn" prescription for these agents, and even those patients who show some good response initially should have monthly reevaluation to be sure that the agent is still having some beneficial effect. Because the rheumatic disorders are so chronic and people become tolerant of some pain, it is often necessary to discontinue anti-inflammatory agents periodically to see if they are still effective.

It has been estimated that there are probably 70 newer compounds under study, many of which are propionic acid derivatives and some of which are entirely different chemical compounds from those now used. It seems likely

Anti-inflammatory Drugs	mg/Tablet or Capsule	Daily Dose	Price/100 Tablets or Capsules	Daily Cost
Indocin (Indomethacin, Merck, Sharp & Dohme)	25-50	2-3 (100-150 mg)	$18.00 (50 mg)	$ .36- .54
Butazolidin (Phenylbutazone, Geigy)	100	2-3	13.00	.26- .39
Tolectin (Tolmetin, McNeil)	200	6-9	17.00	1.02-1.53
Naprosyn (Naproxen, Syntex)	250	2-3	24.00	.48- .72
Nalfon (Fenoprofen, Dista-Lilly)	300	8	12.00	.96
Motrin (Ibuprofen, Upjohn)	300-400	4-6 (1,600-2,400 mg)	14.00 (400 mg)	.56- .84
Bufferin	500 (7½ grain)	8-10	2.30	.18- .23
Ascriptin	500 (7½ grain)	8-10	2.25	.18- .23

that many patients with mild rheumatic disease (perhaps 50% of all cases) can be well managed with one of these agents if aspirin is not sufficient.

Aspirin still remains the standard and perhaps best overall anti-inflammatory agent for rheumatoid arthritis and most rheumatic diseases in spite of the condemning and often erroneous articles which have appeared in the lay press in recent years. By taking aspirin with meals, using antacids between meals, and by using 7.5- and 10-grain tablets, many people who think they are intolerant of aspirin can actually take adequate doses for long periods of time, and will save considerable money in the process.

Homer R. Goehrs, MD, Austin.

YOU AND TEXPAC AND THE NOVEMBER ELECTIONS

The Nov 2 general elections represent both a challenge and an opportunity for individual Texas physicians and their political action committee, TEXPAC.

To meet our citizenship responsibilities intelligently, we must prepare for Nov 2 as if it were the only examination for the final grade in the course. Most of us will have up to 20 races and 40 candidates to research and evaluate. Candidly, we should admit that more effort is needed here than many of us are prepared to give. Previous studies have shown that only a few voters will understand the issues, much less know who the candidates are, what they believe, and why they should be elected, then paid to make decisions for all of us.

The second difficult step is getting ourselves to the polls. The good intentions of nearly one-fifth of our citizenry are lost in a busy day. Another one-fifth of us (them!?) have no plans to vote at all, and won't.

As a result of this carelessness and apathy, only a 60% vote is expected in November, which means that a minority (30% plus), not a majority, will elect our local, state and national leaders.

TEXPAC's preparation for Nov 2 began two years ago with the recruitment of local physician and auxiliary members. Since that time these 400 volunteer leaders have helped raise more than a half million dollars, interviewed and evaluated nearly 300 candidates, and organized local support activities in behalf of favored candidates. Fortunately for Texas medicine, these efforts represent a doubling of money resources and activity compared to election year 1974.

TEXPAC's principal goal is to help elect men and women who will give medicine a fair hearing on all health issues, including the special problems our profession is encountering.

Our 1976 TEXPAC track record to date is good; how we do on Nov 2 depends upon our ability to enroll more dues-paying members and to stimulate widespread physician and auxiliary interest and participation in the election process.

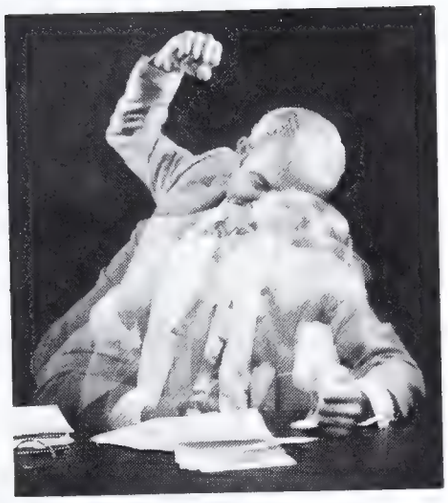
The beneficiaries of an informed and politically active medical profession are the profession itself and the patients it serves.

For success we urge you to: (1) join TEXPAC; (2) study the issues and candidates (call your TEXPAC county chairman); (3) give financial and volunteer support to favored candidates; and (4) vote and encourage others to vote, too.

Countless tributes to our nation's past, present and future have been offered this year. What better 1976 contribution can we physicians make than the active support and election of intelligent and responsible candidates?

What we do in the next 30 days will set the future course of our great profession and country. Be a vital part of the political process before, during and after Nov 2.

Sam A. Nixon, MD, Floresville,
Chairman, TEXPAC.



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COMING SOON. Hospital programs for compulsive eaters and overweight individuals.
Hospital programs for compulsive smokers with pulmonary and cardiovascular disorders.

*Webster's New Collegiate Dictionary

Good show: "Emergency in Texas"

Public opinion exerts a great influence on legislators, and we physicians now must make every effort to give the public the facts about the malpractice insurance mess and its disastrous consequences.

One of the ways we can do this is to tell our story, again and again, and seek the active support of everyone who will listen.

TMA now has a ten-minute film, "Emergency in Texas: The Malpractice Insurance Crisis," available for showing to lay audiences.

Vivid and informative, the documentary summarizes development of the professional liability insurance crisis in Texas, explains why the situation has made medical care more expensive and less accessible, and calls on the public to urge state legislators to end the crisis by passing necessary laws.

Your help is needed in showing this film to as many civic and community groups as possible because malpractice insurance is going to be a volatile issue in the 1977 Texas Legislature, and Medicine needs all the support that it can muster.

Although "Emergency in Texas" was made for lay audiences, physicians will want to see it, too. County society and hospital staff meetings could be used for previews, and news media representatives might be invited. In addition, some television stations are interested in airing the film as a public service, and I hope that all of you will explore these possibilities directly with local station managers.

Ideally, the film should be shown by an informed physician who can answer questions afterward, but it is comprehensive enough to stand on its own if time is limited.

TMA's Department of Communication will provide all the help you need except a buddy to flip the light switch—the 16-mm sound film, a suggested introduction, a one-page summary of TMA's policy on the malpractice insurance crisis, fact-packed brochures to distribute to your audience, and even an eight-point check list with which the greenest beginner can put on a smooth program.

Aside from being foolproof this presentation has other attractive features: It is timely, informative, newsworthy, dramatic, entertaining, and brief!

County medical societies in large metropolitan areas have copies of the film, and more copies are available from TMA headquarters.

I urge you to contact lay groups in your area and offer to present "Emergency in Texas."

You can arrange to obtain the film and copies of the pamphlet, "No Texan can escape this epidemic," by writing or calling Mr. Jon Hornaday, Department of Communication, Texas Medical Association, 1801 North Lamar Blvd., Austin, Texas 78701, phone 512-477-6704.

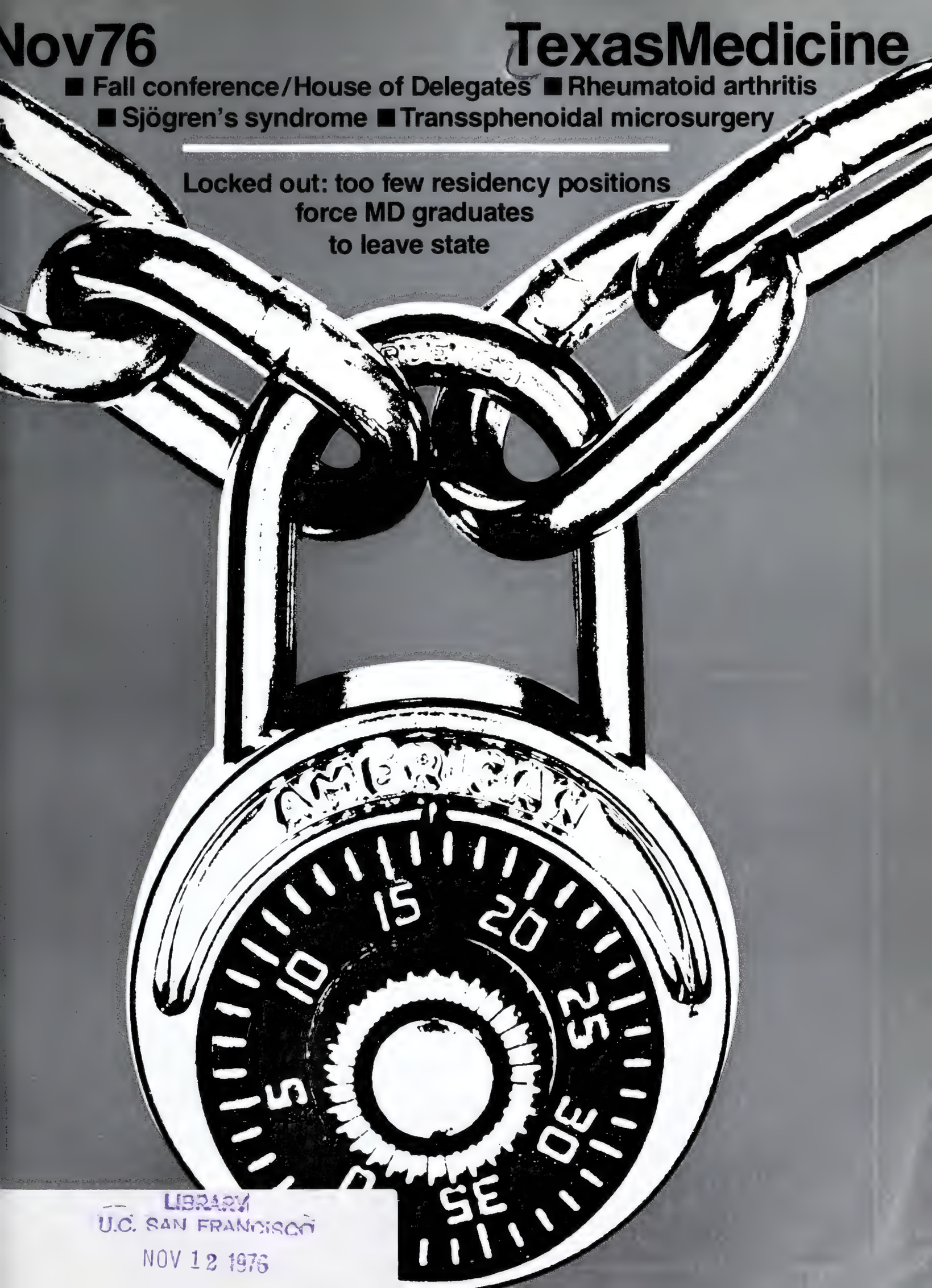
L. S. Thompson, Jr., MD, President, Texas Medical Association.

Nov76

TexasMedicine

■ Fall conference/House of Delegates ■ Rheumatoid arthritis
■ Sjögren's syndrome ■ Transsphenoidal microsurgery

Locked out: too few residency positions force MD graduates to leave state



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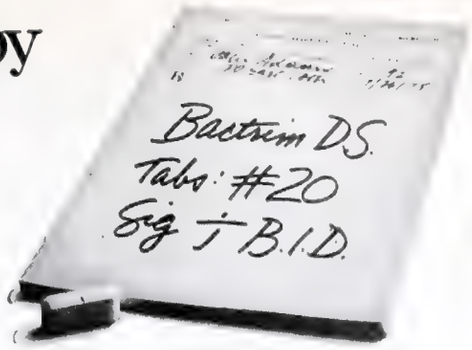
10-day Bactrim therapy outperforms 10-day ampicillin therapy.



In a multicenter, double-blind study of patients with chronic or frequently recurrent urinary tract infection, Bactrim 10-day therapy outperformed ampicillin 10-day therapy by 27.2%, when comparing patients who maintained clear cultures for eight weeks. Criterion for "clear culture" was 1000 or fewer organisms/ml of urine.

While adverse reactions noted in this study were mild (*e.g.*, vomiting, nausea, rash), more serious reactions can occur with these drugs. See manufacturer's product information for complete listing. Maintain adequate fluid intake; perform frequent CBC's and urinalyses with microscopic examination.

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Bactrim™ DS
(160 mg trimethoprim and 800 mg sulfamethoxazole)
Double Strength tablets
Just 1 tablet B.I.D.

Bactrim™

(80 mg trimethoprim and 400 mg sulfamethoxazole)
2 tablets B.I.D.

For chronic or frequently recurrent cystitis and pyelonephritis due to susceptible organisms.

Before prescribing, please consult complete product information, a summary of which follows:

Indications: Chronic urinary tract infections evidenced by persistent bacteriuria (symptomatic or asymptomatic), frequently recurrent infections (relapse or reinfection), or infections associated with urinary tract complications, such as obstruction. Primarily for cystitis, pyelonephritis or pyelitis due to susceptible strains of *E. coli, Klebsiella-Enterobacter, Proteus mirabilis, Proteus vulgaris* and *Proteus morganii.*

NOTE: The increasing frequency of resistant organisms limits the usefulness of antibacterials, especially in these urinary tract infections. The recommended quantitative disc susceptibility method (*Federal Register,* 37:20527-20529, 1972) may be used to estimate bacterial susceptibility to Bactrim. A laboratory report of "Susceptible to trimethoprim-sulfamethoxazole" indicates an infection likely to respond to Bactrim therapy. If infection is confined to the urine, "Intermediate susceptibility" also indicates a likely response. "Resistant" indicates that response is unlikely.

Contraindications: Hypersensitivity to trimethoprim or sulfonamides; pregnancy; nursing mothers.

Warnings: Deaths from hypersensitivity reactions, agranulocytosis, aplastic anemia and other blood dyscrasias have been associated with sulfonamides. Experience with trimethoprim is much more limited but occasional interference with hematopoiesis has been reported as well as an increased incidence of thrombopenia with purpura in elderly patients on certain diuretics, primarily thiazides. Sore throat, fever, pallor, purpura or jaundice may be early signs of serious blood disorders. Frequent CBC's are recommended; therapy should be discontinued if a significantly reduced count of any formed blood element is noted. **Data are insufficient to recommend use in infants and children under 12.**

Precautions: Use cautiously in patients with impaired renal or hepatic function, possible folate deficiency, severe allergy or bronchial asthma. In patients with glucose-6-phosphate dehydrogenase deficiency, hemolysis, frequently dose-related, may occur. During therapy, maintain adequate fluid intake and perform frequent urinalyses, with careful microscopic examination, and renal function tests, particularly where there is impaired renal function.

Adverse Reactions: All major reactions to sulfonamides and trimethoprim are included, even if not reported with Bactrim. *Blood dyscrasias:* Agranulocytosis, aplastic anemia, megaloblastic anemia, thrombopenia, leukopenia, hemolytic anemia, purpura, hypoprothrombinemia and methemoglobinemia. *Allergic reactions:* Erythema multiforme, Stevens-Johnson syndrome, generalized skin eruptions, epidermal necrolysis, urticaria, serum sickness, pruritus, exfoliative dermatitis, anaphylactoid reactions, periorbital edema, conjunctival and scleral injection, photosensitization, arthralgia and allergic myocarditis. *Gastrointestinal reactions:* Glossitis, stomatitis, nausea, emesis, abdominal pains, hepatitis, diarrhea and pancreatitis. *CNS reactions:* Headache, peripheral neuritis, mental depression, convulsions, ataxia, hallucinations, tinnitus, vertigo, insomnia, apathy, fatigue, muscle weakness and nervousness. *Miscellaneous reactions:* Drug fever, chills, toxic nephrosis with oliguria and anuria, periarteritis nodosa and L. E. phenomenon. Due to certain chemical similarities to some goitrogens, diuretics (acetazolamide, thiazides) and oral hypoglycemic agents, sulfonamides have caused rare instances of goiter production, diuresis and hypoglycemia in patients; cross-sensitivity with these agents may exist. In rats, long-term therapy with sulfonamides has produced thyroid malignancies.

Dosage: Not recommended for children under 12. Usual adult dosage: 1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) b.i.d. for 10-14 days.

For patients with renal impairment:

Creatinine Clearance (ml/min)	Recommended Dosage Regimen
Above 30	Usual standard regimen
15-30	1 DS tablet (double strength), 2 tablets (single strength) or 4 teasp. (20 ml) every 24 hours
Below 15	Use not recommended

Supplied: Double Strength (DS) tablets, each containing 160 mg trimethoprim and 800 mg sulfamethoxazole, bottles of 100; Tel-E-Dose® packages of 100. Tablets, each containing 80 mg trimethoprim and 400 mg sulfamethoxazole — bottles of 100 and 500; Tel-E-Dose® packages of 100; Prescription Paks of 40, available singly and in trays of 10.

Oral suspension, containing in each teaspoonful (5 ml) the equivalent of 40 mg trimethoprim and 200 mg sulfamethoxazole; fruit-licorice flavored — bottles of 16 oz (1 pint).

ROCHE
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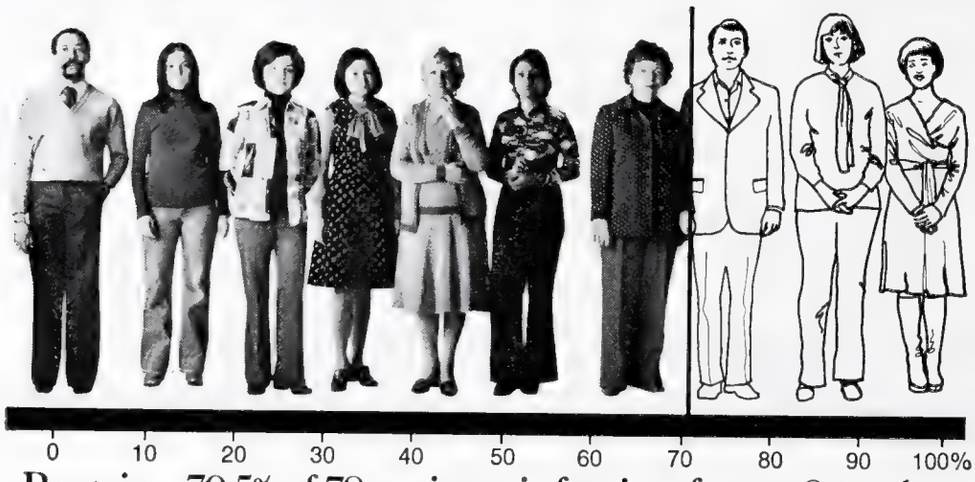
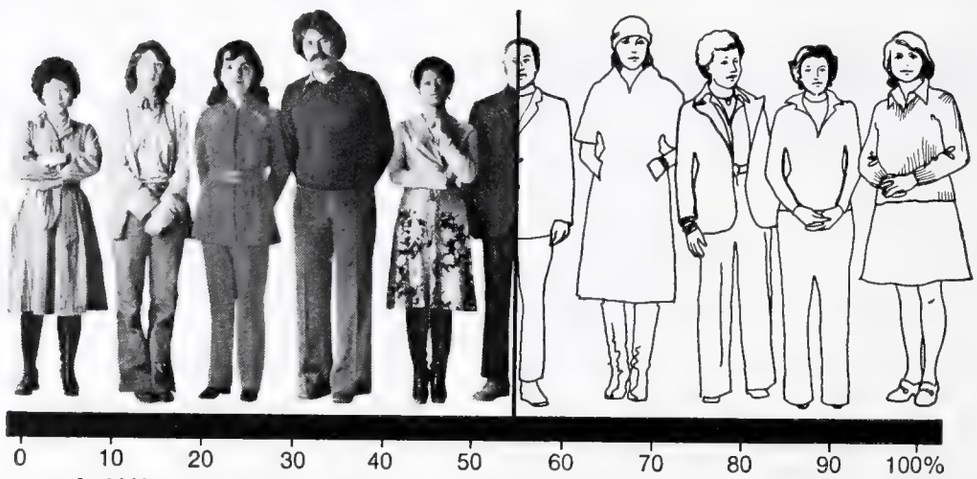
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

In a multicenter study of patients with chronic or frequently recurrent urinary tract infections

Bactrim was 27.2%* more effective than ampicillin in keeping patients infection-free for 8 weeks.†



Bactrim–70.5% of 78 patients infection-free at 8 weeks.



ampicillin–55.4% of 74 patients infection-free at 8 weeks.

*This percentage is arrived at by the statistical method of dividing the difference between Bactrim and ampicillin results (15.1%) by the percent of ampicillin results (55.4%).

†Data on file, Hoffmann-La Roche Inc., Nutley, New Jersey 07110

Bactrim™ DS

(160 mg trimethoprim and 800 mg sulfamethoxazole)

Double Strength tablets Just 1 tablet B.I.D.

Note: Bactrim tablets were used in these clinical trials. Bioequivalency studies show one Bactrim DS double strength tablet is equivalent to two Bactrim tablets.

Please see summary of product information on preceding page. ROCHE

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VOL 72 NOVEMBER 1976

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ON THE COVER

Too few residency positions in Texas force Texas MD graduates to leave the state for residency training. The Texas graduates watch as the residency doors swing shut. For an explanation of the problem and a TMA proposal to solve that problem turn to page 130.

NEXT MONTH

Articles scheduled for the December issue are on oil and gas raw materials in medicine, prednisone for myasthenia gravis, *Salmonella heidelberg* as a cause of meningitis, the wet child, and the mentally ill defendant in Texas.

You need to know what was presented at TMA's 1976 Update on Medical Issues

This important conference probed many serious topics. TMA's audio cassette service lets you keep informed quickly and easily on these significant problems. On one tape you can hear experts outline the latest developments in:

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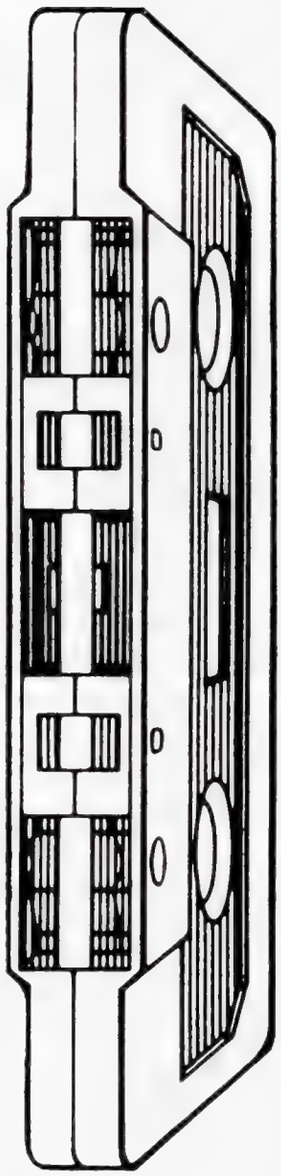

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ANTIMINTH® (pyrantel pamoate)
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Actions. Antiminth (pyrantel pamoate) has demonstrated anthelmintic activity against *Enterobius vermicularis* (pinworm) and *Ascaris lumbricoides* (roundworm). The anthelmintic action is probably due to the neuromuscular blocking property of the drug.

Antiminth is partially absorbed after an oral dose. Plasma levels of unchanged drug are low. Peak levels (0.05-0.13μg/ml) are reached in 1-3 hours. Quantities greater than 50% of administered drug are excreted in feces as the unchanged form, whereas only 7% or less of the dose is found in urine as the unchanged form of the drug and its metabolites.

Indications. For the treatment of ascariasis (roundworm infection) and enterobiasis (pinworm infection).

Warnings. *Usage in Pregnancy:* Reproduction studies have been performed in animals and there was no evidence of propensity for harm to the fetus. The relevance to the human is not known.

There is no experience in pregnant women who have received this drug.

The drug has not been extensively studied in children under two years; therefore, in the treatment of children under the age of two years, the relative benefit/risk should be considered.

Precautions. Minor transient elevations of SGOT have occurred in a small percentage of patients. Therefore, this drug should be used with caution in patients with preexisting liver dysfunction.

Adverse Reactions. The most frequently encountered adverse reactions are related to the gastrointestinal system.

Gastrointestinal and hepatic reactions: anorexia, nausea, vomiting, gastralgia, abdominal cramps, diarrhea and tenesmus, transient elevation of SGOT.

CNS reactions: headache, dizziness, drowsiness, and insomnia. Skin reactions: rashes.

Dosage and Administration. *Children and Adults:* Antiminth Oral Suspension (50 mg of pyrantel base/ml) should be administered in a single dose of 11 mg of pyrantel base per kg of body weight (or 5 mg/lb.); maximum total dose 1 gram. This corresponds to a simplified dosage regimen of 1 ml of Antiminth per 10 lb. of body weight. (One teaspoonful=5 ml.)

Antiminth (pyrantel pamoate) Oral Suspension may be administered without regard to ingestion of food or time of day, and purging is not necessary prior to, during, or after therapy. It may be taken with milk or fruit juices.

How Supplied. Antiminth Oral Suspension is available as a pleasant tasting caramel-flavored suspension which contains the equivalent of 50 mg pyrantel base per ml, supplied in 60 ml bottles and Unitcups™ of 5 ml in packages of 12.

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Please see prescribing information on facing page. NSN 6505-00-148-6967

Antiminth® ORAL SUSPENSION
(pyrantel pamoate) equivalent to 50mg pyrantel/ml

NEWS

Fall conference speakers provide updates on medical issues

Texas Sen Lloyd Bentsen told Texas physicians that despite opposition from organized medicine, national health insurance will become a reality. Sen Bentsen was one of the featured speakers at the TMA fall conference 1976 Update on Medical Issues in Austin Sept 18.

National health insurance will be approved during the next Congressional session, Bentsen said. The issue is determining which form of insurance will best serve both doctors and patients, he said.

Bentsen assured the more than 900 physicians attending the fall conference that he will not support any form of health insurance which threatens the traditional doctor-patient relationship or makes physicians federal employees.

The Texas Democrat repeated his opposition to the comprehensive bill sponsored by Sen Edward Kennedy, whose legislation would cost an estimated $86 billion.

Dr Sammons warns cost control is greatest danger

The greatest danger American physicians face is attempts at cost control, warned James Sammons, MD, Executive Vice President of the American Medical Association. "Either we are going to control it or someone else is going to control it for us," Dr Sammons warned.

Sammons predicted that Congress will avoid the issue of financial health insurance during this session. "I don't think the United States Congress is so fiscally irresponsible as to 'jump off the cliff' by not reviewing the costs of national medical insurance before enacting the legislation," Dr Sammons said.

"I don't think the United States can afford national health insurance," he said. He added that about 85 percent of Americans already have basic health insurance, and 70 percent have "catastrophic" illness insurance to cover the costs of an expensive major illness.

The poor receive financial aid through Medicare and Medicaid, Dr Sammons said. The only persons not covered by some kind of insurance are the "near poor" who are employed but cannot afford any kind of insurance, he said. He proposed tax breaks for employers who provide insurance to those low income workers, saying it would be a better solution than national health insurance.

Dr Webb reports commission progress

E. Don Webb, MD, one of the two physicians on the Texas Medical Professional Liability Study Commission, reviewed actions taken by the commission. Dr Webb told the conference that although he and fellow commission member Milton Davis, MD, consider their work "the most important assignments they will ever receive," other members are not as dedicated. "This comes as no surprise since I am sure I would not be as interested or diligent in my participation should this subject deal with liability for architects or construction workers," he said.

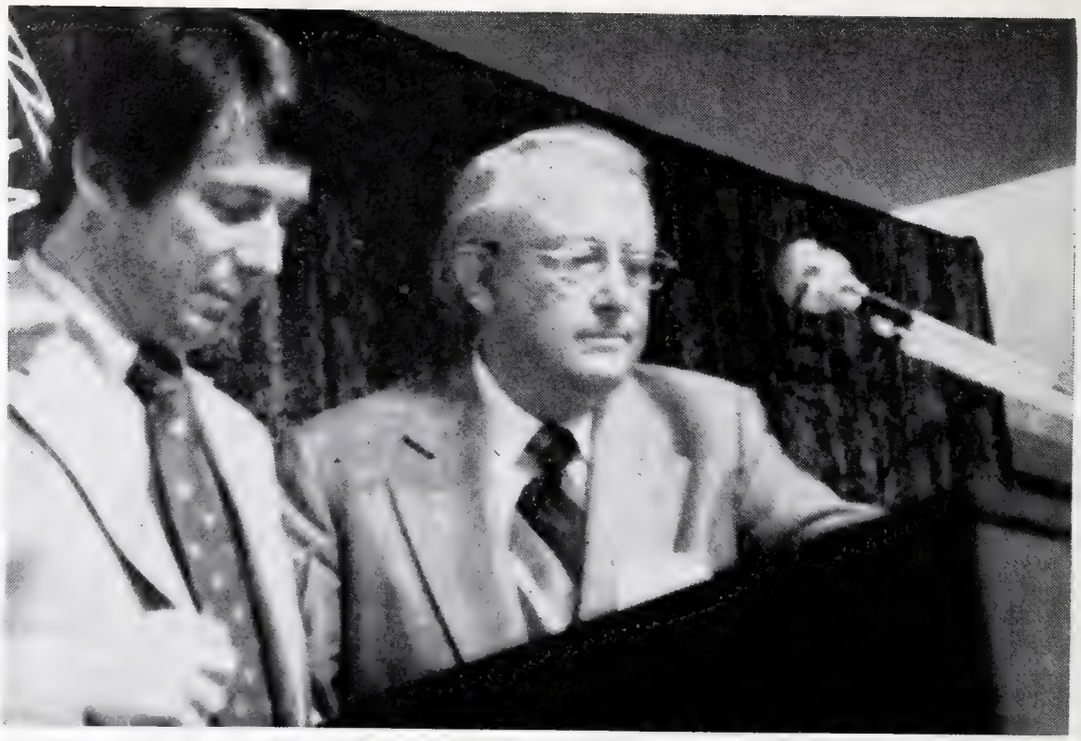
Dr Webb reported the recommendations of subcommittee 2, chaired by Dr Davis. The recommendations of that subcommittee, that have been approved by the entire commission, deal with expansion of the State Board of Medical Examiners and regionalization of the State Board of Medical Examiners by forming panels throughout the state.

"I feel that despite the previous problems of composition, timing, and procedural rules, you will see that there has been a substantial amount of progress very much in keeping with this association's legislative goals established after the 1975 legislative session," Dr Webb said.

Although a final report is not completed, Dr Webb cited several of the commission's recommendations:

L. S. Thompson, Jr., TMA president, right, presents a special plaque to State Sen Ray Farabee, of Wichita Falls, at the TMA Fall Conference in Austin in September. Sen Farabee sponsored S.B. 635 during the 1975 session of the Texas legislature to solve the medical professional liability insurance crisis. The bill had been supported by TMA as a long-range solution to the crisis.

NEWS



State Rep Pike Powers, of Beaumont (left) accepts a special plaque from L. S. Thompson, Jr., MD, TMA president, at the TMA Fall Conference in September. Rep Powers sponsored H.B. 1129 in the 1975 session of the Texas legislature as a proposal to solve the Texas medical professional liability insurance crisis.

—The health care provider and the patient should have the option to enter into a voluntary arbitration agreement. The agreement would be binding after 30 days, thus allowing for revocation by either party and eliminating the element of adhesion.
—Awards for pain and suffering not exceed $100,000. There should be no limitation on actual damages—past, present or future.
—The expiration date of the Joint Underwriting Association should be changed from Dec 1977 to Dec 1979.
—Rating systems should remain subject to approval by the State Board of Insurance.

Dr Davis explains utilization review developments

A utilization review system will be costly and many valuable physician hours will be used, Milton V. Davis, MD, Dallas said.
However, the data can lead to improvements in medical care and can provide a valuable weapon to resist and refute distortions of fact and deliberate misrepresentations about health care delivery, he said.
The overall plan is to place health care under federal control, Dr Davis predicted. The doctor emphasized the TMA position on utilization review advises expenses should be borne by the requiring authority and physicians should control the systems design.

Clements predicts cost control will become Medicaid's first priority

Cost containment will become the first priority for Medicaid in Texas because of the frequently-repeated pledge by state officials of no new taxes, predicted Jamie H. Clements, JD, chairman of the State Board of Public Welfare.
Clements said the real victims of the "Medicaid Mills" publicity are recipients desperately in need of health services and dedicated physicians and workers who fully participate in and support the Medicaid program.
"Inevitably, exposure of the waste and mismanagement in Medicaid will give those who don't believe the government has any business helping the people, the opportunity to demand that the entire program be scrapped," Clements predicted.

John P. Coughlin, MD, of San Angelo, a member of the Committee on Health

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NEWS

Planning, told conference participants about developments of health planning in Texas.

Joseph T. Painter, MD, of Houston, the president of the Texas Institute for Medical Assessment, brought conferees up-to-date on activities in the Professional Standards Review Organizations in Texas.

Jerry Marcontell, MD, of Houston, a member of the Council on Communication, described the programs underway to inform Texans about the professional liability insurance crisis.

Joseph T. Ainsworth, MD, of Houston, the chairman of the Council on Medical Legislation, predicted the 1977 Texas legislature will consider bills about medical education, medical and allied health professions, funding problems in the health field, and various drug-related matters. The most important issue, Dr Ainsworth said, continues to be the professional liability insurance crisis.

TMA executive board approves dues increase

A $50 dues increase, a plan to develop alternative approaches to the physician maldistribution problem in Texas, and support of clean water bonds propositions were all issues considered by the TMA Executive Board at its meeting Sept 19, 1976, in Austin.

The Executive Board voted to support the recommendation by Ben R. Keller, Jr., MD, treasurer, for a $50 dues increase. The increase will be considered by the House of Delegates in November. Dr Keller recommended the dues increase to help finance TMA efforts in the interest of physicians and medicine. The increase to $180 annual dues would help efforts in areas as professional liability insurance, health planning laws, and maximum allowable cost plans.

The Executive Board voted to empower the Council on Medical Education and Hospitals to develop alternative approaches to the solution of the problem of geographic maldistribution of physicians with the cooperation of the Council on Medical Service and Insurance and the Committee on Rural Health. A preliminary report is planned by January.

The board officially endorsed the November ballot proposition 2 relating to the "Clean Water Bonds," that would increase state appropriations for funds to be used by small communities to create or improve existing sewage disposal systems.

Dallas will be the site for the 1979 TMA Annual Session, as approved by the Executive Board. The new Hyatt Regency will be one of the headquarter hotels if construction is complete. The board also approved plans for an Executive Board thinking and planning session sometime after the House of Delegates meeting in November.

Polio vaccine contract approved

The federal government will now be required to guarantee informed consent for every recipient of polio vaccine in public clinics, under a new contract with Lederle Laboratories, reports the *American Medical News*.

Lederle and the Center for Disease Control officials agreed to a new contract — after three months' delay — in the wake of critical shortages of polio vaccine in some states.

The new contract will state that CDC will prepare and distribute "risk-benefit statements" that must be signed by every recipient of the vaccine (or his/her parents or guardians), before the vaccine can be administered in public clinics.

The signed statement requirement probably will not extend to distribution of vaccine by physicians in their normal office practices, said CDC spokesman Betty Hooper. The agreement was reached late on Sept 21, as the vaccine shortages in some state health departments were becoming critical.

Texas swine flu program begins

After months of preparation, several delays, and the hurdling of several legal complications, the swine flu immunization program began in Texas in October.

The A/New Jersey swine flu vaccines are arriving in Texas and clinics began opening in October on a limited basis. However, because of several deaths of elderly persons who had been vaccinated, officials in several states including Texas halted the flu vaccine clinic for six days. Alarmed by the deaths, Texas health officials suspended all swine flu inoculations in the state from Oct 12 through Oct 25. The swine influenza immunization program in Harris County continued during that time. The City Health Department received a separate federal grant to coordinate the inoculation program throughout Harris County. Deliveries of the vaccine began in small quantities, with amounts gradually increasing in later deliveries. It may be late November or December before there is enough vaccine to fill all orders adequately.

If physicians do not charge for the vaccine or its administration, they can obtain free supplies such as needles and syringes from the Texas Department of Health Resources.

The federal swine flu liability law went into effect Oct 1, 1976. To be protected under the law from suits a doctor must do several things after Oct 1 including following federally approved informed consent procedures, not charging for the vaccine, not charging for the administration of the vaccine, and cooperating with the federal government in defending any swine flu suit against him. There are still no recommendations for immunization of children less than age 3 nor for children ages 3-17 who are not in the high-risk group.

The American Academy of Pediatrics (AAP), in conjunction with the federal government's Center for Disease Control, has recommended that certain groups of "high risk" children be vaccinated against the possible swine flu epidemic.

The Academy's Committee on Infectious Diseases, which issued the recommendation, defined high risk children as those with chronic bronchopulmonary disease (such as chronic asthma and cystic fibrosis), heart disease, chronic renal disease, chronic neuromuscular disorders (muscular dystrophy), chronic metabolic disorders (diabetes), malignancies and immunodeficient states.

The AAP recommendation applies to high risk children between the ages of three and 18 years, but does not include infants at the present time.

Direct all questions or complaints on medical matters of the swine flu immunization program to the local health department, The Texas Department of Health Resources regional office, or Philip Mallory, MD, of the Texas Department of Health Resources in Austin, 1100 W. 49th St., (phone 512-458-7321). Other type queries can go to local and regional health offices or Lon Gee of the Austin Texas Department of Health Resources (phone 512-458-7284).

TMA cited for community work

The Texas Medical Association has been selected as the 1976 recipient of the Distinguished Service Citation from the Texas Association for Health, Physical Education, and Recreation.

The award is presented each year to an organization or person for meritorious contributions to the fields of health education, physical education, and recreation. In presenting the award, the association particularly recognized the work of the TMA School Health Committee in conducting annual conferences.

The award will be presented during the first general session of the 53rd Annual Convention of the Texas Association for Health, Physical Education, and Recreation Dec 2, 1976 in San Antonio.

"Approximately 95% of the [U.S.] children of ages 1-5 years had iron intakes below the standard"

U.S. Public Health Service (1974)

Where did that surprising statistic originate?

From the first survey designed to assess the nutritional status of the entire U.S. population. The conclusion above was the most striking result reported in the preliminary findings released in January 1974.

Were they really dealing with a true sample of the entire U.S. population?

Those conclusions were based on a sample of 10,126 people—a probability sample established by the U.S. Bureau of Census to reflect the country's total population, regardless of race or income.

Among those 95% with substandard iron intake, how low was their intake actually?

For whites and blacks, for both sexes, for both income levels, the mean intake of iron (as a percent of the standard) for the 1-5 year age group ranged from 60 to 69%. Typically, then, 95 children out of 100 have iron intakes that are only ⅔ of the standard.

Whose iron intake standard were they using?

The standard set by the Food and Nutrition Board of the National Academy of Sciences for this group.

Implication of all this?

That iron deficiency among preschoolers is anything but rare and signs like mental apathy, lethargy, irritability, behavior problems, may be telegraphing iron deficiency.

Suggesting iron supplementation?

Not necessarily. In many instances this situation can be corrected by proper diet and, obviously, this is the preferred route. When dietary improvement is not attainable, consider a supplement.

But consistent use of an iron supplement is difficult to achieve.

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Is this cited study generally available?

Yes, from the Office of Information, National Center for Health Statistics, 5600 Fishers Lane, Rockville, MD., 20852. Request "First Health and Nutrition Examination Survey", 1974, DHEW Pub. No. (HRA) 74-1219-1.

*B. Blackwell: The Drug Defaulter. *Clinical Pharmacology and Therapeutics* 13:841 (1972).

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NEWS

TMA council recommends more Texas primary care residencies

Following a two year study, the Texas Medical Association Council on Medical Education and Hospitals has recommended that the number of Texas residencies be increased.

Concluding the two year study the council has designed a plan for the development and expansion of primary care residencies from the present 388 positions to 618 by 1979.

The council is recommending that the positions be affiliated with the six Texas schools for doctors of medicine.

During the study it became apparent that the number of residencies has not kept pace with the increasing number of Texas medical school graduates.

The council also reaffirmed the 1975 position by the TMA House of Delegates that state funding should be sought at the next session of the Texas legislature for the expansion and educational aspects of the new primary care residencies. The House recommended that the Coordinating Board, Texas College and University System, should serve as the mechanism for the distribution of funds.

William F. Ross, MD, of San Benito, chairman of the council, testified before the Coordinating Board about the need for expansion of Texas residencies in October. He also spoke at a news conference in the Texas Capitol in October.

The council has now been empowered to develop alternative approaches to the solution of the problem of the geographic maldistribution of Texas physicians. The council will be working with the cooperation of the Council on Medical Service and Insurance and the Committee on Rural Health with a preliminary report by January.

Houston Chronicle calls state doctor draft a bad idea

Calling the state doctor draft a bad idea, the *Houston Chronicle* published an editorial Sept 19, 1976, objecting to the government passing laws to make people work where government wishes them to. "This really outrageous proposition keeps coming up in connection with the shortage of doctors in rural areas and, to a lesser degree, in urban ghetto areas," the newspaper said.

TEXAS DEVELOPMENT AND EXPANSION OF PRIMARY CARE RESIDENCIES 1976-1979

	1976	1979
University of Texas system schools of medicine	205	355
Baylor College of Medicine	88	144
Texas Tech University School of Medicine	37	61
Texas residencies not affiliated with medical schools	58	58*
Total	388	618

*Present number of Texas residencies not affiliated with medical schools. The chart assumes that at least the same number will be available in 1979.

"It has been proposed in the Congress where it has sensibly been rejected. Now State Rep Fred Head is proposing a bill to this effect for the next session of the state legislature. He would require 20 per cent of each first-year class in the state's medical schools to sign a contract to serve a certain period of time in rural areas.
"This idea is wrong first because it is coercive and secondly because it establishes a precedent that government can use its power to determine where an individual may work. Or, at what, since that notion follows once the original premise is granted," the newspaper said. The editorial states the paper has no objection to medical students contracting for future services in exchange for education financing, as long as it is on a voluntary basis.
But, the editorial said, "The concept that government has the right to order a citizen's residence or career is abhorrent. Drafting doctors through the coercive power of the state's investment in medical schools and medical education is exactly that concept, no matter how it is rationalized."

Hidalgo schools begin comprehensive school health program

Seeking to establish the first comprehensive school health program in the community, the Hidalgo Independent School District began working with University of Texas health professionals and students in September to begin assessing student health.
The Hidalgo school system hosted a multidisciplinary team of physicians, allied health professionals and allied health and medical students from the University of Texas Medical Branch at Galveston.
"Like in any community, the children in Hidalgo have the right to health, but with unresolved health problems and without adequate knowledge or ability in their families to maintain wellness, they cannot develop their full potential in the educational system or in society," said Fred Garcia, Hidalgo school superintendent.
The first task was to document the health status and behaviors of the school population. The program involves a basic physical examination for each child performed by the medical students and students in the physician's assistant program.
Hidalgo was chosen as the target community for implementing this concept because the small city has an underserved population trying to understand their health problems and bring more health services to the locale.

Unit opens in Houston for emergency psychiatric care

A new around-the-clock emergency psychiatric unit, resulting from the cooperative efforts of Baylor College of Medicine, the Harris County Hospital District, and Harris County Mental Health Mental Retardation Authority opened in September in Houston at Ben Taub General Hospital.
Betsy Comstock, MD, assistant professor of psychiatry at Baylor and director of emergency psychiatric services at Ben Taub, heads this new unit, which is staffed by Baylor's psychiatry faculty and residents and psychology interns.
"In the past, many psychiatric emergencies or near-emergencies had to be turned away because of lack of space and staff," Dr Comstock said. "The new unit allows us to thoroughly evaluate and effectively treat all patients with severe, often incapacitating, mental problems.
"Problems bringing patients to the unit range from severe depression to psychotic disorganization to drug overdose to suicidal tendency," Dr Comstock said. Persons usually stay in the psychiatric unit for 48-72 hours. Then they are referred to the community agencies. Pending permission by the patient, his records precede his arrival at these various agencies.

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Indications: Relief of anxiety and tension occurring alone or accompanying various disease states.

Contraindications: Patients with known hypersensitivity to the drug.

Warnings: Caution patients about possible combined effects with alcohol and other CNS depressants. As with all CNS-acting drugs, caution patients against hazardous occupations requiring complete mental alertness (*e.g.*, operating machinery, driving). Though physical and psychological dependence have rarely been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage; withdrawal symptoms (including convulsions), following discontinuation of the drug and similar to those seen with barbiturates, have been reported.

> ***Usage in Pregnancy:* Use of minor tranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested in several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

Precautions: In the elderly and debilitated, and in children over six, limit to smallest effective dosage (initially 10 mg or less per day) to preclude ataxia or oversedation, increasing gradually as needed and tolerated. Not recommended in children under six. Though generally not recommended, if combination therapy with other psychotropics seems indicated, carefully consider individual pharmacologic effects, particularly in use of potentiating drugs such as MAO inhibitors and phenothiazines. Observe usual precautions in presence of impaired renal or hepatic function. Paradoxical reactions (*e.g.*, excitement, stimulation and acute rage) have been reported in psychiatric patients and hyperactive aggressive children. Employ usual precautions in treatment of anxiety states with evidence of impending depression; suicidal tendencies may be present and protective measures necessary. Variable effects on blood coagulation have been reported very rarely in patients receiving the drug and oral anticoagulants; causal relationship has not been established clinically.

Adverse Reactions: Drowsiness, ataxia and confusion may occur, especially in the elderly and debilitated. These are reversible in most instances by proper dosage adjustment, but are also occasionally observed at the lower dosage ranges. In a few instances syncope has been reported. Also encountered are isolated instances of skin eruptions, edema, minor menstrual irregularities, nausea and constipation, extrapyramidal symptoms, increased and decreased libido—all infrequent and generally controlled with dosage reduction; changes in EEG patterns (low-voltage fast activity) may appear during and after treatment; blood dyscrasias (including agranulocytosis), jaundice and hepatic dysfunction have been reported occasionally, making periodic blood counts and liver function tests advisable during protracted therapy.

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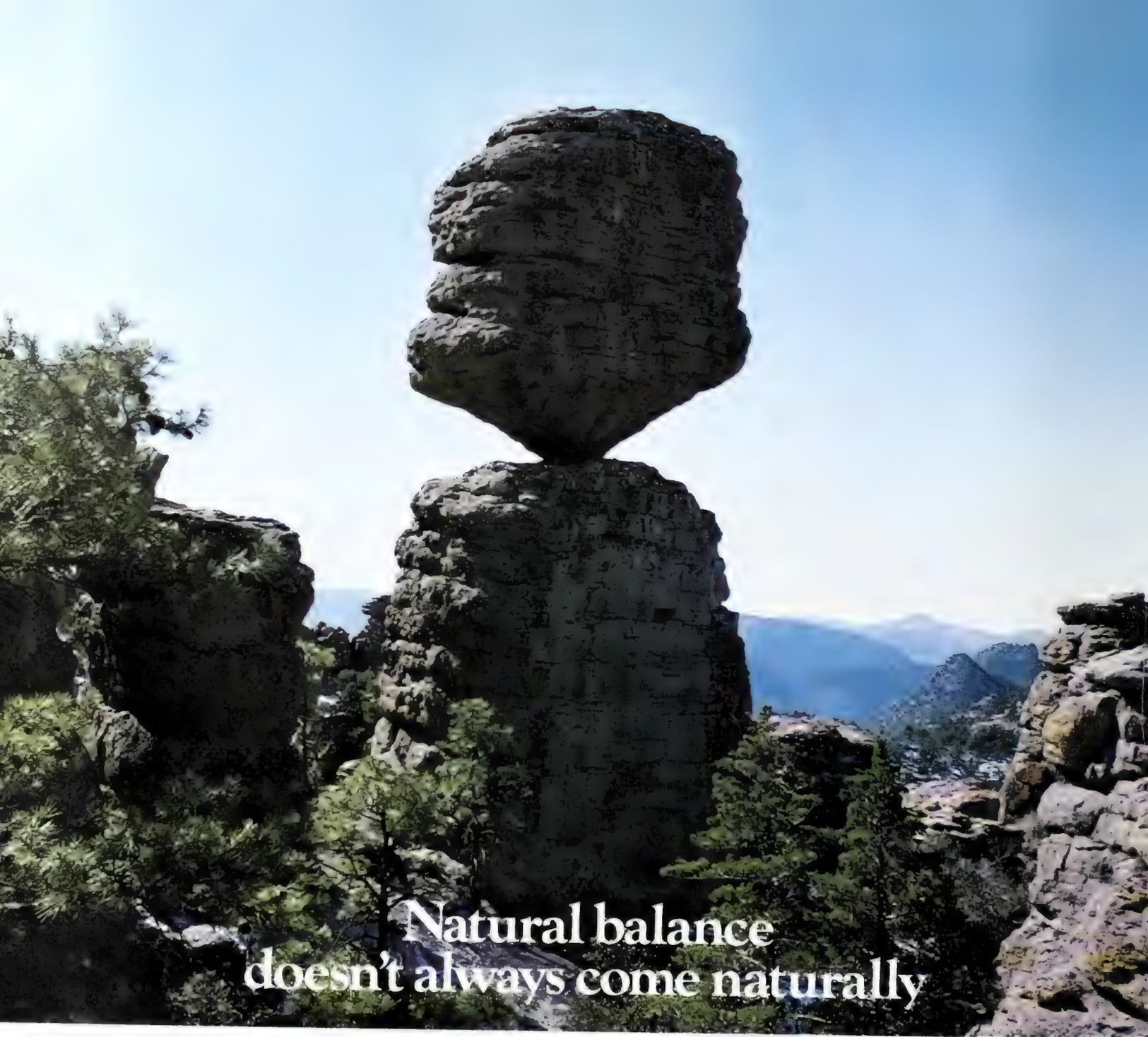

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WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

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Texas physicians surveyed for PSRO preference

The Department of Health, Education, and Welfare has withdrawn its appeal to the Federal District Court's ruling in *Texas Medical Association et al, vs. F. David Mathews, as Secretary of HEW,* invalidating the nine area designations for PSRO in Texas made by HEW in 1974.

HEW has contracted with Crossley Surveys, Inc., of New York, to survey Texas physicians. The firm is currently polling all licensed Texas physicians to determine if the individual physicians of Texas want a single, statewide PSRO or several PSROs.

In two previous polls, Texas physicians have supported the single, statewide PSRO concept, and the Texas Institute for Medical Assessment (TIMA) as the organization endorsed by the TMA House of Delegates to be the designated PSRO agency.

Results of the poll are expected to be announced before the end of the year.

TMA staff testifies before education subcommittee

Members of the Texas Medical Association staff and legal counsel testified before the Texas House Subcommittee on Medical Education of the Committee on Higher Education chaired by Rep Fred Head in September.

Ace Pickens, JD, a member of the TMA legal counsel, Mrs. Marilyn Baker, Managing Editor of *Texas Medicine,* and Paul Gray, director of the Department of Medical Service, testified about TMA's continuing role to assure the supply of well-qualified physicians, particularly in the area of primary care and family practice. The three listed the TMA support of significant expansion of medical education opportunities in Texas, and support of significant increases in the enrollments of existing medical schools in Texas.

They testified that TMA agrees with the recommendations of the "Hobby-Clayton Commission" and the Coordinating Board of the Texas College and University System of full funding of existing medical schools, and concurs with the Commission on state funding for expansion of graduate training positions in primary care and family practice areas. To achieve a continuing supply of physicians to care for all Texans, they testified, the state must concentrate upon providing additional graduate training positions for family practitioners.

Group practice grows AMA survey shows

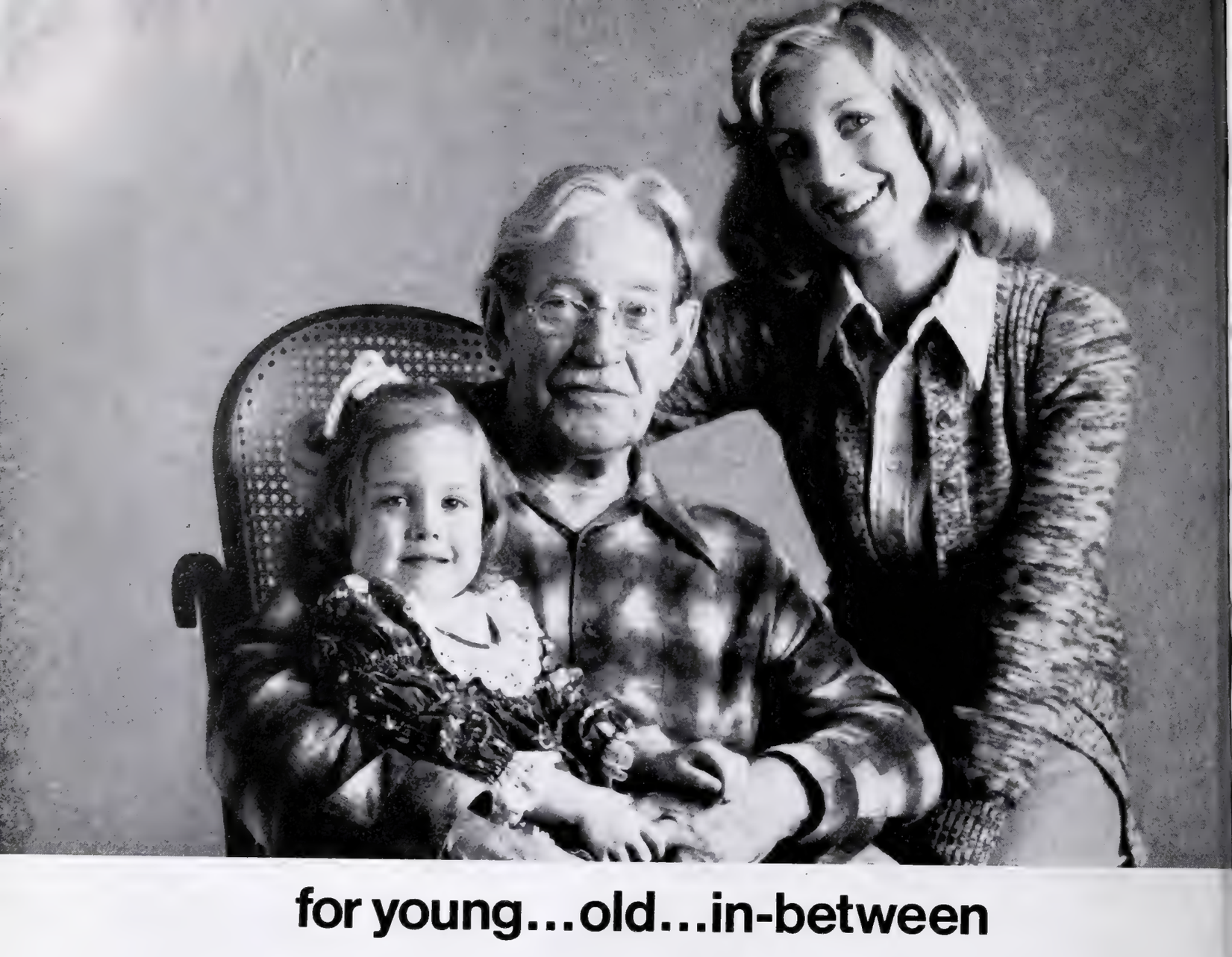
While a substantial portion of the nation's health care is still delivered by the solo practitioner, medical group practice continues to show significant growth in the 1970s.

This is a major finding of the 1975-76 edition of the American Medical Association's *Profile of Medical Practice,* reports the *American Medical News.*

Today, there are 8,483 medical groups in the United States, whose 66,842 physicians represent 23.5 percent of the active non-federal physician population, the AMA studies found. Medical groups also are increasing in size as well as in number.

The study shows that municipal hospitals are devoting more resources to outpatient and emergency care and less to inpatient in the 1970s, and these trends most likely will continue into the 1980s. Many patients will continue to visit emergency departments at hospitals for non-emergency health conditions.

The study also found that economic controls, in effect from August, 1971, to April, 1974, appear to have had important impact on physician's incomes. For most specialists, evidence indicates that increases in practice expenses exceeded the rate of increases in fees, and that this has had a damaging effect on the rate of change in net incomes.



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Houston institutions form oral cancer program

Two Houston health care institutions have joined to establish a dental and oral cancer program that is the first of its kind in the nation.

The University of Texas M.D. Anderson Hospital and Tumor Institute and the Dental Branch of UT's Health Science Center at Houston have formed a joint Department of Dental Oncology.

The two institutions have conducted a joint dental-oral cancer program since 1948, but are expanding to include detailed oral examination as routine testing of every new cancer patient regardless of diagnosis.

Under the direction of Joe B. Drane, MD, of M.D. Anderson and Samuel Dreizen, DDS, of the UT Dental Branch, the department will have a role in the oral management of pediatric patients and patients receiving chemotherapy.

Texas college enrollment increases less than one percent

Statewide enrollment at Texas colleges and universities for fall 1976 increased by less than one percent above fall 1975. Preliminary tabulation by the Coordinating Board, Texas College and University System shows a total fall 1976 enrollment of 681,000, an increase of about 5,760 students, or .85 percent.

Gains are reported by about two-thirds of the public senior universities, but only about one-half of the public junior colleges and private senior institutions are reporting increases.

A solid pattern of increasing enrollment is still holding for medical, dental and health-related schools, both public and private. Preliminary figures show that 6,930 students enrolled in medical, dental and health-related public schools, and 1,651 students enrolled in medical, dental and health-related private institutions.

Commenting on the overall small enrollment increase, Kenneth Ashworth, Texas Commissioner of Higher Education, said the figures underscore the need for caution in further expansion of the Texas system of colleges and universities. The Coordinating Board in recent months has urged a slowdown in expanding higher education, pending a determination on funding by the Texas legislature.

Doctors asked to join the AMA

The chairman and vice-chairman of the Texas delegation to the American Medical Association have sent letters to the general membership of the Texas Medical Association asking them to join the AMA in 1976. Total Texas membership in the AMA has dropped from 9,215 members in 1975 to 8,899 members as of Sept 7, 1976.

"Throughout our practice, we have all benefitted from the leadership role of the AMA in fostering standards of excellence in medical education, in supporting scientific advancement, and in encouraging improvements in health care delivery," said Charles Max Cole, MD, chairman, and N. L. Barker, MD, vice-chairman of the Texas delegation.

The two doctors list numerous accomplishments by the AMA for the medical profession. The AMA successfully challenged utilization review regulations issued by the Department of Health, Education and Welfare, the AMA took HEW to court to fight the maximum allowable costs regulations, and the AMA is defending the ethical standing of the medical profession in a complaint brought by the

Federal Trade Commission concerning solicitation of patients, the doctors said. The AMA also lobbied effectively to prevent the passage and implementation of precertification of hospital admissions, of mandatory government service or payback for all medical school graduates, and of national licensure and relicensure proposals, said Dr Cole and Dr Barker.

NEWS

Medical schools enroll 932 freshmen

Texas Medical schools opened doors this fall to 932 freshmen medical students. Total enrollment on the first day of classes included 746 men and 186 women students.

A total of 15,349 first-year medical students enrolled in 116 medical schools across the nation this fall. This year's enrollments show only slight increases over those of a year ago, as the nation's medical students enrollments level off, at least temporarily. The leveling off is at least partly because, before this fall, no new medical schools had opened since fall of 1973. This year, however, two new medical schools are accepting their charter classes.

Nationally, relative enrollment of both women and underrepresented minority groups has also leveled off. Women students this year will account for about 20.4 percent of total enrollment, compared to 20.5 percent last year.

Minority students from the four underrepresented ethnic groups (blacks, American Indians, Mexican-Americans, and mainland Puerto Ricans) will represent 9.3 percent of the nation's first-year classes.

This fall's enrollment figures show that first-year enrollment is 24 percent greater than it was five years ago, in 1971-72, and total enrollment is nearly 29 percent greater than it was five years ago.

The national preliminary enrollment figures were gathered in the annual survey of medical schools conducted jointly by the American Medical Association and the Association of American Medical Colleges.

New VD strain concerns Center for Disease Control

The Center for Disease Control (CDC) has warned state laboratories and health departments of a new strain of gonorrhea which produces an enzyme that kills penicillin.

The CDC also alerted the World Health Organization about the disease and asked for world-wide cooperation in monitoring new cases of the disease. The CDC late last month

FRESHMAN CLASS SIZES OF MEDICAL AND OSTEOPATHIC SCHOOLS IN TEXAS 1976

School	Male	Female	Total
BAYLOR	131	37	168
TEXAS COLLEGE OF OSTEOPATHIC MEDICINE	61	11	72
TEXAS TECH	34	6	40
UNIVERSITY OF TEXAS:			
DALLAS	176	29	205
GALVESTON	165	41	206
HOUSTON	83	17	100
SAN ANTONIO	96	45	141
Total	746	186	932

Total Enrollment on first day of classes

Source: Admissions Offices of Texas medical schools

reported discovery of the new strain, citing one case at Travis Air Force Base, Calif, and another in St. Mary's County, Md. Later, three more cases were found, two in California and one in Des Moines, Iowa. The CDC said some of the sexual contacts had been made in the Philippines.

Ralph Henderson, MD, director of the CDC's venereal disease control division, said the bacterial gonococcus that causes gonorrhea had become more resistant to penicillin in recent years, but that new treatment schedules utilizing larger doses of penicillin had still proven effective. However, he said the new strain of gonorrhea apparently manufactures an enzyme that kills the penicillin.

AMA outlines policy on release of information

The American Medical Association's policy on the release of information from the physician's data file has been reaffirmed by the Board of Trustees. The policy assures appropriate sharing of data within limits that safeguard the confidentiality of individual physician's records and the AMA's proprietary rights and legal liabilities.

Pressure to release data for commercial and other uses has intensified during the past year. The policy provides for the use of data for specific purposes stated on requests approved by the AMA.

However, data cannot be used for the development of independent physician data files, and start-up tapes will not be provided for developing independent data banks or service bureaus.

Data cannot be used to validate the AMA data base unless a binding agreement is signed with the AMA. The AMA will continue to assist individuals, institutions, organizations and agencies with legitimate needs for information.

TMA president defends medical profession

"I know that with rare exceptions physicians are honest and conscientious, and are doing their best to provide the highest quality of care possible," said the Texas Medical Association president, commenting on national reports of fraud and abuse in the Medicare and Medicaid programs.

L. S. Thompson, Jr., MD, Dallas, said the medical profession condemns and deplores all acts of fraud, including any wrongful acts that may be occurring in government-financed health programs.

"We want our position to be understood loud and clear," Dr Thompson said. "We stand ready to weed out fraud and dishonesty of any within our profession, and we will cooperate with federal or state investigators upon their invitation or request."

Dr Thompson said no physician should be charged with wrongdoing merely because he has received substantial sums for professional services from the Medicaid or Medicare programs. "It must be remembered that these physicians are serving large numbers of people who need medical attention and in many instances such services are being rendered at below actual cost. Also, what is frequently listed as income for one physician often times is, in fact, total income for a group of several physicians who simplify the massive paperwork involved by filing all of the claims under only one physician's name."

"I am pleased that, to the best of our knowledge, no so-called Medicaid mills operate in the state of Texas," the president said.

L. S. Thompson, Jr., MD, TMA president

NEWS

State organizations sponsor Child Abuse Institute series

Approximately 34,000 cases of child abuse were reported in Texas in 1975. More than 10,000 of those cases were proven.

Because of child abuse in Texas the State Bar of Texas and the Texas Department of Public Welfare are co-sponsoring a Child Abuse and Protective Services Institute Series throughout Texas in November and December.

The series is to encourage interaction among social workers, judges, attorneys and other persons or groups working in the child abuse area.

The day-long institutes will be in the following cities on the following dates: Odessa, Nov 4; El Paso, Nov 5; Dallas, Nov 18; Harlingen, Nov 18; Fort Worth, Nov 19; San Antonio, Nov 19; Amarillo, Dec 2; Beaumont, Dec 2; Abilene, Dec 3; Houston, Dec 3; Lubbock, Dec 3; and Austin, Dec 10.

For more information write the State Bar of Texas, Child Abuse Institute, P.O. Box 12487, Capitol Station, Austin, Texas, 78711.

AMA participating in drug reaction studies

The American Medical Association will participate in a three-year project to design a post-market data gathering system on adverse drug reactions and new drug uses. The Joint Commission on Prescription Drug Use, which will be headquartered with a small staff in Washington, D.C., will develop a format for reporting trends in drug prescribing and usage.

It will have computer capability and will provide absolute confidentiality to data received from physicians.

Participation in the program was approved by the AMA Board of Trustees in September.

The proposal to establish the joint commission was made by the Pharmaceutical Manufacturers Association, which will contribute $200,000 annually. Other participating organizations will provide about $10,000 annually. Asked to join the commission are the American Academy of Family Physicians, American Society for Pharmacology and Experimental Therapeutics, American Hospital Association, American Pharmaceutical Association, National Association of Retail Druggists, and American Society of Hospital Pharmacists.

Baylor researchers awarded National Cancer Institute contract

Researchers at Baylor College of Medicine have been awarded a $313,000 contract by the National Cancer Institute for the development of objective, biological criteria to be used in the early identification of people with an unusually high risk of developing lung cancer.

S. Donald Greenberg, MD, professor of pathology at Baylor College of Medicine, and Stephen L. Kimzey, MD, of the Cellular Analysis Laboratory at NASA, will be co-principal investigators on the three-year project.

"Lung cancer can be identified in a matter of days; however, the deadly tumor has probably been developing for 20 years or more before it is diagnosed," Dr Greenberg said. "We believe normal lung cells can be in a stepwise transition or 'deterioration' into cancer cells. According to a cell's shape, size and configuration, cytopathologists can determine the probability of atypical cells later becoming cancerous cells," Dr Greenberg said.

The National Cancer Institute has charged the researchers with the task of developing a set of reliable criteria for uniform classification of atypical lung cells, Dr Greenberg said.

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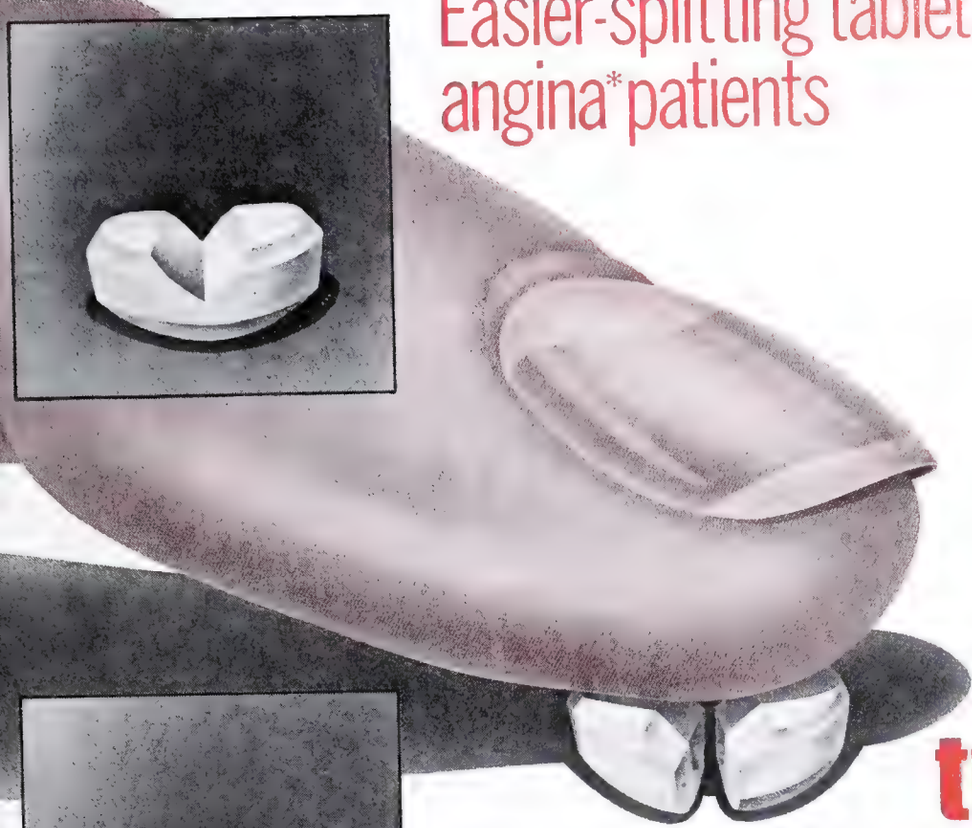

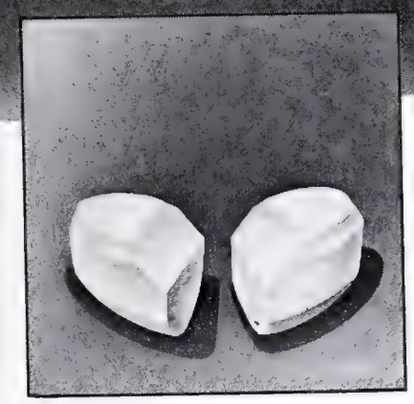

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NEWS

EDS will administer Medicaid in Texas

The State Board of Public Welfare has awarded a $165.6 million contract to the firm of Dallas millionaire H. Ross Perot to manage the Title 19 Medicaid program for Texas' welfare recipients beginning next year. The agreement is for the administration of the Medicaid program for the eight months beginning next Jan 1 for an estimated 750,000 welfare recipients in Texas.

For claims incurred Perot's Electronic Data System Federal Corp (EDS) will underwrite the program in Texas and will process and pay all Medicaid claims. EDS got the contract as the low bidder. Group Hospital Service Inc (Blue Cross-Blue Shield of Texas) which had administered the state's Medicaid program since its inception in 1967, had been the next lowest bidder at $167.3 million.

Nation's death rate hits record low in 1975

The 1975 death rate in the United States was the lowest in the nation's history, the Census Bureau said.

The death rate fell in 1975 to 8.9 deaths for every 1,000 Americans. That was down from 9.1 in 1974 and from 9.7 in 1968, and marked the first time in American history that the rate was below nine per thousand.

The report also said that 1.91 million people died in the U.S. in 1975 — the lowest total since 1967, when 1.86 million died. One factor in the decline in the death rate was the sharp drop in highway and traffic deaths — 45,675 in 1975 compared to 55,069 in 1973. Heart disease continues to be the leading cause of death, but such fatalities have dropped 4.5 percent since 1973, according to the National Center for Health Statistics. There has been an 8.7 percent decline in deaths caused by cerebrovascular disease, the center said.

Of the 15 leading causes of death, only three have increased over the past two years. The cancer rate increased 4.2 percent, suicides by five percent and murders by 4.1 percent.

Wait averages 20 minutes in doctor's office

The average wait in a doctor's office is 20 minutes. This was the finding of the Ninth Periodic Survey of Physicians, conducted by the AMA. The general practitioner is likely to keep a patient waiting the longest of all doctors, an average of 27 minutes. The internist keeps a patient sitting in the reception room for 22 minutes, the surgeon 23 minutes. Waiting time in a psychiatry office averages 5½ minutes.

To get an appointment for a non-emergency health problem the national average wait for a patient is 7.3 days. General practitioners average 4 days' wait for an appointment. The practices of the obstetricians-gynecologists require 17 days.

Tax increase anticipated Jan 1, 1977

A solvency tax increase is anticipated to be imposed upon all experienced tax rated Texas employers effective Jan. 1, 1977, said Sam Lane, Commissioner of the Texas Employment Commission. The solvency tax fund increase will be in addition to any tax increase resulting from charges to employers' accounts due to benefits paid to their former employees.

Lane currently projects the resulting tax increase to be either a 1/10th or 2/10ths of one percent increase.

For further information contact your tax auditor in the local TEC office or contact William Best, chief of tax, Texas Employment Commission, Austin, Tex 78778.

Medicare revises economic index

Medicare's revised economic index to regulate increases in physicians' charges in the program has been published by the Department of Health, Education and Welfare.
For the 12 months beginning July 1, 1976, the index is 1.276. That means 27.6 percent is the maximum increase Medicare will allow in any prevailing charge for physicians' services during those 12 months over the corresponding charge for the same service in the same locality in the base year of fiscal 1973.

The revised economic index was published by HEW in the Sept 8 *Federal Register.*

House of Delegates will meet in Austin, Nov 6 and 7

Physician's professional liability insurance, full funding and expansion of Texas primary care residencies, and a $50 membership dues increase will all be topics facing the Texas Medical Association House of Delegates Nov 6 and 7 in Austin.
Reference committees will begin meetings at 8:30 am Saturday at the Austin Hilton Inn.
The House of Delegates will convene at 8 am Sunday in the Tiffany Ballroom of the Hilton. Presiding will be Speaker of the House Travis Smith, MD, Abilene, and Vice-Speaker of the House, Milton V. Smith, MD, Dallas.

Baylor graduates new physician's assistants

Twenty-four trained physician's assistants comprise the fourth graduating class of the PA program at the Baylor College of Medicine in Houston. Under a doctor's supervision they can take thorough patient histories, do complete physical examinations, order and carry out laboratory and diagnostic procedures, make hospital rounds and teach patients how to carry out whatever regimens their doctor may have prescribed.
After students have completed two years of college, the PA program takes two years to complete. The student receives clinical training instruction in anatomy, pharmacology, physiology, radiology, medical ethics, patient evaluation and an introduction to surgery. Graduates are certified by a division of the National Board of Medical Examiners. There are 94 practicing PAs in Texas. Sixty-five percent work in rural areas.

US study finds serious drug reactions rare

A research study, Registry of Tissue Reactions to Drugs, by Nelson S. Irey, MD, from the Armed Forces Institute of Pathology, has found that serious reactions to drugs are rare. The study classified 827 autopsied cases of adverse drug reactions and found that only 25, or 3 percent, were due to therapeutic errors and could be considered as unjustifiable and maybe preventable.
Dr Irey found that 26.6 percent of the adverse drug reactions in his study were unexpected. A failing in previous studies that had shown a high proportion of serious drug reactions is reportedly overcome by the Armed Forces Institute of Pathology in the Irey study. Severe and lethal adverse drug reactions are relatively rare occurrences in any one geographic area, Dr Irey said. His study thus collected data from many medical facilities located in 37 states over a period of ten years to provide a more accurate national picture.

NEWS

Study shows cancer runs in the family

Cancer often runs in the family, shows a study by Henry T. Lynch, MD, and colleagues of Creighton University School of Medicine, Omaha, Neb. An intensive study of the family history of cancer in 4,515 patients, screened by a multiphasic mobile cancer detection unit in Nebraska, showed that cancer had developed in 8.9 percent of those who had one other person in the family with cancer. Some 16.2 percent of those with two other cases in the family developed cancer. Of those with three others in the family with cancer, 27.4 percent themselves developed cancer.

Dr Lynch points out that those with cancer in the family could be screened periodically to determine if they are also ill. More than 3,000,000 persons in the United States are in families with three or more close relatives with cancer. More than 13,000,000 live in families in which two or more near kin have cancer. Early detection would permit early start of treatment, an important factor in gaining a cure, Dr Lynch said.

Physicians rank highest in ethics poll

Physicians rank highest in ethics, results of a Gallup Poll show. Asked, "How would you rate the honesty and ethical standards of the people in these different fields?" 55 percent of those interviewed rated physicians either "very high" or "high." Engineers were second with 48 percent, college teachers third with 44 percent, journalists fourth with 33 percent, and lawyers fifth with 25 percent. Ethical standards of senators and business executives were ranked "very high" or "high" by 19 percent of those interviewed. Only 14 percent gave congressmen this rating. Labor union leaders and advertising executives trailed with 13 percent and 11 percent ratings respectively.

Hospital monitoring book published

The second edition of the Quality Assurance Monitor Report Book has been published by the Commission on Professional and Hospital Activities. The book supplies a method for monitoring the quality of care given to all patients in a hospital and for determining priorities for in-depth medical care evaluation studies. The book lists more than 400 elements of care related to quality and design including justification for admissions, justification for therapy (including surgery), validation of diagnosis, outcomes, critical investigations and critical management. For each element the report book displays norms of performance for the United States, the four US census regions and Canada, based on data from hospitals participating in a 1974 study. For more information, write the Commission on Professional and Hospital Activities, 1968 Green Road, Ann Arbor, Mich, 48105.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 9/30/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+14.1	−33.0%	− 6.2%	1.4%
Loomis-Sayles Mutual Fund	+ 9.4	−21.0%	− 3.7%	3.2%
Mercantile Bank Equity Fund	+15.7	−35.8%	−16.5%	3.5%
Mercantile Bank Fixed Income Fund	+ 6.2	−13.5%	− 8.6%	7.6%
T Rowe Price Growth Stock Fund	+11.8	−34.1%	− 1.9%	2.0%
T Rowe Price New Income Fund	+ 4.0	N/A	N/A	7.8%
Stein Roe & Farnham Balanced Fund	+10.1	−24.9%	+ 4.1%	3.0%
Standard & Poor 500 Stock Average	+16.7	−30.9%	− 2.1%	
Dow Jones Industrial Average	+16.2	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

WASHINGTON: MEDICAL SCHOOL REPORT. There is no debate that a physician shortage exists, and distribution is definitely a problem, reports the California based Carnegie Council on Policy Studies in Higher Education. Of 13 new medical schools planned in the United States, the report states that eight are not needed. As alternatives, the report suggests expansion of existing schools and greater utilization of area health education centers where community hospitals serve as decentralized facilities for initial primary care physician training. The report calls for continuing physician education and recommends termination of preferential immigration status for foreign medical school graduates.

WASHINGTON: MEDICARE-MEDICAID ANTI-FRAUD BILL WAS A CASUALTY. The Medicare-Medicaid anti-fraud bill was a casualty of the congressional rush to adjourn in September. The bill, introduced by Sen Herman Talmadge (D-Ga) and passed by the Senate, was aimed especially at abuses involving so-called "Medicaid mills." The measure would also have given professional standards review organizations new and controversial authority involving such operations. There was strong sentiment for the bill in Congress, as well as administration endorsement. The AMA supported the legislation "in principle" but suggested numerous changes in the language. The bill foundered in the House because of the press of other business. Instead, Congress approved a token bill establishing within HEW a new Office of Inspector General to oversee program abuses. The Office of Inspector General created by the amendment would include a special Medicare-Medicaid investigation unit. This legislation was attached to another bill and passed just before adjournment.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: AMA URGES JAIL TERMS IN MEDICAID FRAUD CASES. The AMA Executive Vice President, James Sammons, MD, has urged corrective actions, in response to allegations of widespread fraud and abuse of the Medicaid programs discussed in hearings of the Senate Special Committee on Aging. The committee was headed by Sen Frank Moss, (D-Utah). "The time has come to crack down and crack down hard on Medicaid fraud and abuse. Responsibility for the sorry state of Medicaid is broadly shared among the administrators of the programs, members of the public, Medicaid mill operators, chiropractors, podiatrists, dentists, pharmacists, optometrists, technicians, laboratory owners, and, I am ashamed to say, some members of the medical profession," Dr Sammons said. He pledged to take all corrective actions appropriate for a professional organization to take.

AUSTIN: STATE RURAL MEDICAL EDUCATION BOARD. Sam A. Nixon, MD, Floresville, and Lawrence Harmel, Seymour, have been reappointed to six-year terms on the State Rural Medical Education Board by Gov Dolph Briscoe.

WASHINGTON: HEALTH PLANNING. Health Planning, (HR15504), a bill to repeal the National Health Planning and Resources Development Act of 1974 (PL 93-641) has been introduced by Rep Olin Teague, (D-Tex).

AUSTIN: ATTORNEY GENERAL'S OPINION. Texas Attorney General John Hill in an opinion to the Texas Department of Mental Health and Mental Retardation (Opinion No. H-874) has ruled that it is not within the present authority of the Texas Board of Mental Health and Mental Retardation to adopt and implement a policy that MHMR physicians be authorized to practice privately at MHMR facilities.

WASHINGTON: HEW APPOINTS PHARMACEUTICAL REIMBURSEMENT ADVISORY COMMITTEE. A pharmaceutical reimbursement advisory committee has been appointed for the HEW program for maximum allowable cost (MAC) for reimbursement for prescription drugs. The committee will administer the MAC program and establish limits of cost reimbursement for drugs. The committee, chaired by James T. Doluisio, Dean of the Pharmacy School at the University of Texas at Austin, includes 15 governmental members representing the fields of medicine, pharmacy, pharmaceutical marketing, pharmacology, public health, and consumer affairs.

AUSTIN: HEALTH RESOURCES APPOINTMENT. Donald A. Horn, Houston, has been appointed to the Board of the Texas Department of Health Resources. Horn fills the unexpired six-year term of Raul Jiminez, San Antonio, who resigned from the board. The term expires Feb 1, 1979.

WASHINGTON: REPORT OF THE NATIONAL CENTER FOR HEALTH STATISTICS. Americans made an estimated 263,390,000 visits to the offices of general and family physicians during 1974, an average of 1.3 visits per person per year, according to the National Center for Health Statistics. Of the estimated 634,073,000 visits by Americans to all physicians during 1974, two out of every five visits were to general or family physicians. An estimated 77.8 percent of all Americans under age 65 had hospital insurance in 1974, while 76.3 percent had surgical insurance coverage, the report stated.

CALIFORNIA: RIGHT TO DIE BILL APPROVED. The California legislature has approved the nation's first right to die bill for terminally ill patients. The bill allows adult, terminally ill patients to order their physicians in a signed living will, to disconnect life-sustaining equipment if the procedure serves no purpose except to prolong artificially death. California Gov Jerry Brown has signed the bill. The bill requires the living will to be signed in the presence of two witnesses, and neither witness can be a relative of the patient or physician. The attending physician cannot be held liable for death, and insurance companies cannot classify the death as suicide for the purpose of denying life insurance payments.

HAWAII: MANDATORY MALPRACTICE INSURANCE. A new mandatory maipractice insurance law became effective Sept 1 in Hawaii. The law requires physicians to carry at least $100,000 malpractice insurance and requires insurance prior to licensing. Tom Thorson, executive director of the Hawaii Medical Association, said the association will contest the law's constitutionality. The new law also requires physicians to pay a 30 percent surcharge on insurance premiums into a state administered state compensation fund to pay settlements that are more than $100,000.

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CONTINUING EDUCATION COURSES

NOVEMBER

Cardiovascular Disease

Title: Update on Cardiac Pacemakers
Sponsors: Department of Internal Medicine, UT Health Science Center at Dallas, Southwestern Medical School; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: Sheraton-Dallas Hotel
Dates: Nov 6-7, 1976
Credit: 12 hours, Category I, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Title: Anesthesia and Surgery of Ischemic Heart Disease
Sponsor: Baylor College of Medicine
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Nov 18-19, 1976
Fee: $150 (approximate)
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Emergency Care

Title: 1976 Texas Emergency Medicine Symposium
Sponsors: Texas Chapter, American College of Emergency Physicians; Emergency Department Nurses Association
Location of Course: Sheraton Dallas
Dates: Nov 7-10, 1976
Contact: Leonard Riggs, Jr, MD, 3500 Gaston, Suite 503, Dallas 75246

Endocrinology

Title: Diabetes Mellitus: Problem Areas
Sponsor: UT Health Science Center at Houston
Location of Course: Texas Medical Center, Houston
Dates: Nov 19-20, 1976
Contact: UT Health Science Center at Houston, Division of Continuing Education, Box 20367, Houston 77025

Hematology

Title: Clinical Hematology
Sponsor: UT Health Science Center at San Antonio
Dates: Nov 20-21, 1976
Duration: Continuous, 2 days, 5 hours instruction per day, 10 total course hours
Fee: $75
Designed For: General practitioners; Specialists
Enrollment: Minimum, 25; Maximum, 50
Credit: 10 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Contact: Timothy Caris, MD, Assoc Dean for Continuing Medical Education, UT Health Science Center at San Antonio, 7703 Floyd Curl Dr, San Antonio 78284

Malignant Disease

Title: 21st Annual Clinical Conference: Current Concepts in the Management of Primary Bone and Soft Tissue Tumors
Sponsors: UT System Cancer Center, MD Anderson Hospital and Tumor Institute, Houston; UT Health Science Center at Houston, Division of Continuing Education; American Cancer Society, Texas Division
Location of Course: Shamrock Hilton Hotel, Houston
Dates: Nov 11-12, 1976
Duration: Continuous, 2 days, 6 hours instruction per day, 13 total course hours
Fee: None
Designed For: General practitioners; Specialists
Credit: 12 hours, AAFP; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, clinical conference, lecture, open question, panel
Contact: George R Blumenschein, MD, Assistant Director/Education, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, 6723 Bertner, Houston 77025

Title: Day in Pathology on Bone and Soft Tissue Tumors; Bone and Soft Tissue Seminar: Clinical and Pathological Correlation
Sponsors: Department of Pathology, UT System Cancer Center, MD Anderson Hospital and Tumor Institute; Texas Society of Pathologists
Location of Course: Shamrock Hilton Hotel, Houston
Date: Nov 13, 1976
Duration: Continuous, ½ day, 4 hours instruction
Fee: None
Designed For: General practitioners; Specialists in Pathology, Orthopedics, Surgery, Radiology, Radiotherapy
Credit: 4 hours
Teaching Methods: Audiovisual materials, open question, panel, seminar
Contact: George R Blumenschein, MD, Assistant Director/Education, UT System Cancer Center, MD Anderson Hospital and Tumor Institute, 6723 Bertner, Houston 77025

Ophthalmology

Title: Symposium on Ophthalmology for the Non-Ophthalmologist
Sponsors: UT Medical School at Houston, Program in Ophthalmology; Texas Society for the Prevention of Blindness
Location of Course: Hermann Hospital Auditorium, Houston
Date: Nov 6, 1976
Duration: ½ day, 3 hours instruction
Fee: $15
Designed For: General practitioners
Credit: AAFP

Teaching Methods: Audiovisual materials, lecture, open question
Contact: Richard S Ruiz, MD, Director, Program in Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77030

Title: Pediatric Ophthalmology for Non-Ophthalmologists
Sponsor: Baylor College of Medicine
Location of Course: Texas Children's Hospital Auditorium, Houston
Date: Nov 13, 1976
Fee: $50
Credit: 6 hours
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Radiology & Radioisotopes

Cancelled: Seminar with Specialists in Radiology, UT Health Science Center at San Antonio, Nov 10-12, 1976

Other

Title: Workshop on Hearing Aid Evaluation
Sponsor: Baylor College of Medicine
Location of Course: Marriott Hotel, Houston
Dates: Nov 23-24, 1976
Fee: $250
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Title: Child Abuse and Protective Services Institute Series
Sponsors: State Bar of Texas, State Department of Public Welfare
Locations and Dates of Course: Odessa (Nov 4), El Paso (Nov 5), Dallas (Nov 18), Harlingen (Nov 18), Fort Worth (Nov 19), San Antonio (Nov 19)
Fee: Pre-registration, $30; Door registration, $35
Designed For: Department of Public Welfare staff workers; Juvenile, district, domestic relations and other judges; County and district attorneys; Legal aid attorneys; School, hospital and police personnel
Contact: State Bar of Texas, Child Abuse Institute, Box 12487, Capitol Station, Austin 78711

DECEMBER

Cardiovascular Disease

Title: 22nd Annual Cardiology Program: Selected Topics in Cardiology
Sponsor: UT Health Science Center at Houston, Division of Continuing Education
Location of Course: St Joseph Hospital Auditorium, Houston
Dates: Dec 7-9, 1976
Duration: Continuous, 2½ days, 18 total course hours
Designed For: General practitioners; Specialists; Elementary and advanced students of cardiology
Credit: 18 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Neurology

Title: Current Therapy of Common Neurological Disorders
Sponsors: Department of Neurology, UT Health Science Center at Dallas, Southwestern Medical School; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: UT Health Science Center at Dallas
Dates: Dec 10-11, 1976
Credit: 12 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Ophthalmology

Title: Hermann Hospital Ophthalmology Annual Alumni Meeting
Sponsors: UT Medical School at Houston, Department of Ophthalmology; Hermann Hospital, Houston
Location of Course: Holiday Inn, Medical Center, Houston
Date: Dec 11, 1976
Duration: 1 day, 8 hours instruction
Fee: $50
Designed For: Specialists in Ophthalmology
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Richard S Ruiz, MD, Chairman, Department of Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77025

Psychiatry

Title: Phenomenology and Treatment of Schizophrenia
Sponsor: Department of Psychiatry, Baylor College of Medicine, Houston
Dates: Dec 9-10, 1976
Duration: Continuous, 2 days
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

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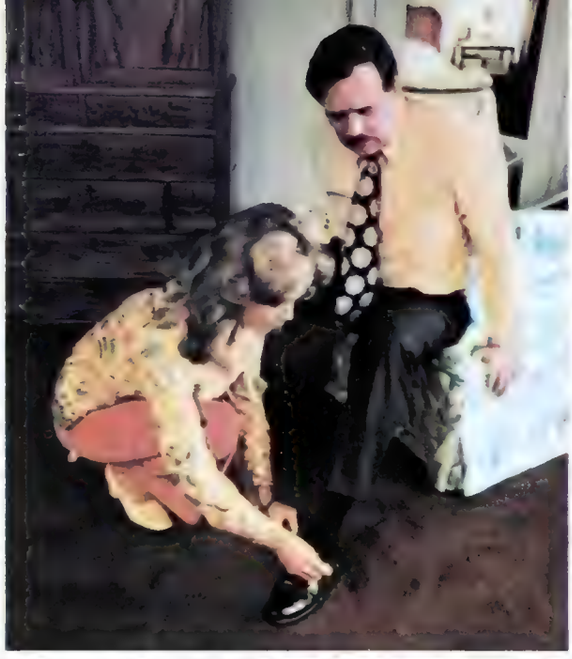

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Pregnancy and Lactation: Safe use not established; weigh potential benefits against potential hazards in pregnancy, nursing mothers (concentrations in breast milk are two to four times that in plasma), or women of childbearing potential.
Children Under Twelve: Not recommended.
Potentially Hazardous Tasks: Driving a motor vehicle or operating machinery.
Additive Effects: Effects of carisoprodol and alcohol, other CNS depressants or psychotropic drugs may be additive.
Drug Dependence: Use cautiously in addiction-prone patients.
Precautions: To avoid excess accumulation, use caution in patients with compromised liver or kidney function.
Adverse Reactions: *Central Nervous System:* Drowsiness, dizziness, vertigo, ataxia, tremor, agitation, irritability, headache, depressive reactions, syncope, insomnia, idiosyncratic reaction (see "Warnings").
Allergic or Idiosyncratic: In previously unexposed patients, these are usually seen after 1-4 doses and include rash, erythema multiforme, pruritus, eosinophilia, fixed drug eruption with cross reaction to meprobamate. Asthmatic episodes, fever, weakness, dizziness, angioneurotic edema, smarting eyes, hypotension and anaphylactoid shock may be manifestations of severe reactions. In such cases, stop carisoprodol and initiate appropriate treatment (e.g., epinephrine, antihistamines, corticosteroids).
Cardiovascular: Tachycardia, postural hypotension, facial flushing.
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Hematologic: Leukopenia and pancytopenia (on carisoprodol plus other drugs).
Usual Adult Dosage: One 350 mg tablet three times daily and at bedtime.
Overdosage: Has produced stupor, coma, shock, respiratory depression, and, very rarely, death. The effects of an overdosage of carisoprodol and alcohol or other CNS depressants or psychotropic agents can be additive even when one of the drugs has been taken in the usual recommended dosage. Empty stomach, treat symptomatically; cautiously give respiratory assistance, CNS stimulants, pressor agents as needed. Carisoprodol is metabolized in the liver and excreted by the kidney. Diuresis and dialysis have been used successfully with related drug meprobamate. Carefully monitor urinary output; avoid overhydration; observe for possible relapse due to incomplete gastric emptying and delayed absorption.

Before prescribing, consult package circular or latest PDR information.

1. Hindle, T.H. III: Calif. Med. *117*:7 (Aug.) 1972. 2,3. Unpublished Data on file, Medical Department, Wallace Laboratories, Cranbury, N.J.

COMING MEETINGS

TEXAS MEDICAL ASSOCIATION HOUSE OF DELEGATES

The fall session of the Texas Medical Association House of Delegates will take place Saturday, Nov 6, and Sunday, Nov 7, 1976. The opening session has been scheduled for 8 am Saturday in the Austin Hilton Hotel, followed by reference committee hearings at 9 am. The House of Delegates will act on reference committee reports at the second session starting at 8 am Sunday. Any TMA member may attend reference committee hearings to speak to issues of concern to him or her.

Contact: C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.

TEXAS DISTRICT BRANCH, AMERICAN PSYCHIATRIC ASSOCIATION

Perry Ottenberg, MD, associate clinical professor, Department of Psychiatry, the University of Pennsylvania, and Shervert H Frazier, Jr, MD, psychiatrist-in-chief, McClane Hospital, Belmont, Mass, will speak to the members of the Texas District Branch of the American Psychiatric Association during their annual meeting Nov 12-14, 1976, at the Camino Real Hotel, Juarez, Mexico. Other speakers on the program are Kenneth D Gaver, MD, Austin; Ismet Karacan, MD, Houston; and Larry R Kimsey, MD, Dallas.

Contact: Iris Wenzel, 1801 N Lamar Blvd, Austin 78701

UT, M.D. ANDERSON HOSPITAL AND TUMOR INSTITUTE

"Current Concepts in the Management of Primary Bone and Soft Tissue Tumors" will be the subject of the 21st Annual Clinical Conference at the Shamrock Hilton Hotel, Nov 11-12, 1976, in Houston. The conference is sponsored by The University of Texas, M.D. Anderson Hospital and Tumor Institute. Topics for discussion include etiology, diagnosis and pathology of bone tumors (osteogenic, Ewing, chondrosarcoma and giant cell). Discussion of soft tissue sarcoma will include Rhabdomyosarcoma.

Contact: Stephen C Stuyck or Margaret Davis, MD, M.D. Anderson Hospital and Tumor Institute, Houston 77030

CURRENT NATIONAL MEETINGS

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS, Clinical Symposium on Gynecologic Endoscopy, Hyatt Regency Atlanta, Nov 17-21, 1976. Scientific program to include papers by physicians, gynecologists, engineers, other scientists and administrators concerned with increasing efficiency and effectiveness of medical care and research. Research employing gynecologic endoscopic techniques and improving medical care through developing these systems are primary objectives of clinical symposium. Presentation of prize for best resident paper in gynecologic endoscopy. Contact: 11239 S Lakewood Blvd, Downey, Calif 90241.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, Annual Meeting, San Francisco Hilton Hotel, Nov 11-15, 1976. Theme: The Next Hundred Years. Programs for Council of Deans, Organization of Student Representatives, Council of Teaching Hospitals, Council of Academic Societies, Group on Medical Education, others. Program topics include developments in medical education; educational stress; the role of medical education in reducing medical costs and the demand for medical services; women in medicine; contributions and benefits of minorities in medical education; mandatory continuing medical education. Contact: One Dupont Circle, NW, Washington, DC 20036.

SOUTHERN MEDICAL ASSOCIATION, 70th Annual Scientific Assembly, The Rivergate, New Orleans, Nov 7-10, 1976. Theme: Improving the Quality of Medical Care. Nineteen postgraduate courses deal with ENT emergency care for the nonotolaryngologist, morphology of peripheral blood smears and bone marrow sections, gynecologic oncology for the practicing physician, serious infections in obstetrics and gynecology, ischemic heart disease. Paul M Stevens, MD, Houston, is program director for postgraduate course on respiratory therapy. All courses acceptable for Category I credit toward AMA Physician's Recognition Award. Contact: 2601 Highland Ave, Birmingham, Ala 35205.

For other courses and symposiums, see Continuing Education Courses, pp 32-33.

NOVEMBER

AMERICAN ACADEMY OF MAXILLOFACIAL PROSTHETICS, San Diego, Calif, Nov 8-10, 1976. 110 S Jerge Dr, Elma, NY 14059.

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Newton, Mass, Nov 8-12, 1976. 430 N Michigan Ave, Chicago 60611.

AMERICAN ACADEMY OF PHYSICAL MEDICINE AND REHABILITATION, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN ASSOCIATION FOR CLINICAL IMMUNOLOGY AND ALLERGY, Tucson, Ariz, Nov 28-Dec 2, 1976. Box 912, Omaha 68101.

AMERICAN ASSOCIATION OF GYNECOLOGICAL LAPAROSCOPISTS, Atlanta, Nov 17-21, 1976. 11239 S Lakewood Blvd, Downey, Calif 90241.

AMERICAN ASSOCIATION FOR RESPIRATORY THERAPY, Miami Beach, Fla, Nov 5-10, 1976. Robert R Weilacher, Exec Dir, 7411 Hines Place, Dallas 75235.

AMERICAN BOARD OF PATHOLOGY, Chicago, Nov 18-20, 1976. 1820 Exchange Natl Bank Bldg, 610 N Florida Ave, Tampa, Fla 33602.

AMERICAN CONGRESS OF REHABILITATION MEDICINE, San Diego, Calif, Nov 7-12, 1976. 30 N Michigan Ave, Ste 922, Chicago 60602.

AMERICAN HEART ASSOCIATION, Miami Beach, Fla, Nov 15-19, 1976. 44 E 23rd St, New York 10010.

■ **AMERICAN SOCIETY OF CYTOLOGY, Houston, Nov** 3-6, 1976. Warren R Lang, MD, Sec-Treas, Health Sciences Center, 130 S Ninth St, Suite 1006, Philadelphia 19107.

ASSOCIATION OF AMERICAN MEDICAL COLLEGES, San Francisco, Nov 11-15, 1976. One Dupont Circle, NW, Washington, DC 20036.

FLORIDA CHAPTER, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Orlando, Fla, Nov 21-24, 1976. Registrar, Pediatric Emergencies, 1919 Beechway Rd, Suite 5C, Jacksonville, Fla 32207.

■ **MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Houston, Nov 11-12, 1976. Stephen C Stuyck or** Margaret Davis, MD, MD Anderson Hospital and Tumor **Institute, Houston 77030.**

MEDICAL ASSOCIATION OF GEORGIA, Atlanta, Nov 19-20, 1976. 938 Peachtree St, NE, Atlanta 30309.

MEDICAL SOCIETY OF THE STATE OF NEW YORK, New York, Nov 7-11, 1976. 420 Lakeville Rd, Lake Success, NY 11040.

MEDICAL SOCIETY OF THE UNITED STATES AND MEXICO, Guadalajara, Mexico, November, 1976. c/o Virginia Bryant, 333 W Thomas Rd, Phoenix, Ariz 85013.

MEDICAL SOCIETY OF VIRGINIA, Williamsburg, Va, Nov 4-7, 1976. 4205 Dover Rd, Richmond, Va 23221.

MID-AMERICAN BREAST CANCER SYMPOSIUM, Madison, Wis, Nov 5-6, 1976. William B Hobbins, Pres, Wisconsin Breast Cancer Detection Foundation, Inc, 7803 Mineral Point Rd, Madison, Wis 53717.

NATIONAL ASSOCIATION FOR MENTAL HEALTH, Philadelphia, Nov 16-19, 1976. 1800 N Kent St, Arlington, Va 22209.

NATIONAL EYE RESEARCH FOUNDATION, Las Vegas, Nev, Nov 7-11, 1976. 18 S Michigan Ave, Chicago 60603.

NATIONAL KIDNEY FOUNDATION, Washington, DC, Nov 17-21, 1976. 116 E 27th St, New York 10016.

NEW YORK STATE SOCIETY OF DERMATOLOGY, New York, Nov 8, 1976. 420 Lexington Ave, Ste 443, **New York 10017.**

NEW YORK STATE SOCIETY OF INTERNAL MEDICINE, New York, Nov 10, 1976. 420 Lexington Ave, Ste 443, New York 10017.

OKLAHOMA HOSPITALS BREAST CANCER CONTROL NETWORK, Oklahoma City, Nov 10-11, 1976. 825 Northeast 13th St, Oklahoma City 73104.

PAN AMERICAN ASSOCIATION OF OTO-RHINO-LARYNGOLOGY AND BRONCHOESOPHAGOLOGY, New Orleans, Nov 7-11, 1976. 10921 Wilshire Blvd, Los Angeles 90024.

PENNSYLVANIA MEDICAL SOCIETY, Hershey, Pa, Nov 3-5, 1976. 20 Erford Rd, Lemoyne, Pa 17043.

PUERTO RICO MEDICAL ASSOCIATION, Santurce, PR, Nov 16-20, 1976. 1305 Fernandez Juncos Ave, Box 9387, Santurce, PR 00908.

RADIOLOGICAL SOCIETY OF NORTH AMERICA, Chicago, Nov 28-Dec 3, 1976. 1 MONY Plaza, 15th Floor, Syracuse, NY 13202.

SOUTHERN MEDICAL ASSOCIATION, New Orleans, Nov 8-11, 1976. 2601 Highland Ave, Birmingham, Ala 35205.

■ TEXAS CHAPTER, FLYING PHYSICIANS ASSOCIATION, Del Rio, Nov 12-14, 1976. Joseph E Darsey, MD, Sec-Treas, 150 W Parker Rd, Suite 307, Houston 77022.

■ TEXAS DISTRICT BRANCH, AMERICAN PSYCHIATRIC ASSOCIATION, El Paso/Juarez, Nov 12-14, 1976. Iris Wenzel, 1801 N Lamar, Austin 78701.

■ **TEXAS MEDICAL ASSOCIATION, House of Delegates, Austin, Nov 6-7, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin 78701.**

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-9, 1976. 820 Davis St, Evanston, Ill 60201.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Atlanta, Dec 5-8, 1976. Charlotte Bruskin, Exec Sec, 40 Gramercy Park North, New York 10010.

AMERICAN MEDICAL ASSOCIATION, Philadelphia, Dec 4-8, 1976. 535 N Dearborn St, Chicago 60610.

AMERICAN SOCIETY OF HEMATOLOGY, Boston, Dec 3-5, 1976. Thomas Bradley, MD, Sec, Veterans Administration Hospital, 4150 Clement St, San Francisco 94121.

■ THE CHILDREN'S HEART PROGRAM OF SOUTH TEXAS, DRISCOLL FOUNDATION CHILDREN'S HOSPITAL, Conference on Rural Health in South Texas, Corpus Christi, Dec 9-10, 1976. Box 6530, Corpus Christi 78411.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nev, Dec 12-16, 1976. 1516 N Lake Shore Dr, Chicago 60610.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 2-4, 1976. Reuben H Adams, MD, Pres, 3630 Noble Ave, Dallas 75204.

■ TEXAS ACADEMY CHAPTER, AMERICAN COLLEGE OF PHYSICIANS, Houston, Dec 2-3, 1976. RD Bone, MD, Sec, Box 841, Corsicana, Tex 75110.

JANUARY, 1977

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Vail, Colo, Jan 6-8, 1977. 2650 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN HEART ASSOCIATION, ARIZONA AFFILIATE, Scottsdale, Ariz, Jan 21-22, 1977. 1445 E Thomas Rd, Phoenix, Ariz 85014.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Hollywood, Fla, Jan 30-Feb 5, 1977. Virginia Kendall, Sec, 30 N Michigan Ave, Chicago 60602.

AMERICAN SOCIETY OF CONTEMPORARY OPHTHALMOLOGY, Hollywood, Fla, Jan 30-Feb 5, 1977. John Bellows, MD, Dir, 6 N Michigan Ave, Suite 1110, Chicago 60602.

US VIRGIN ISLANDS MEDICAL SOCIETY, St Croix, VI, Jan 13-15, 1977. James S Glenn, MD, Chairman, US Virgin Islands Medical Society, Box 520, Christiansted, St Croix, US Virgin Islands 00820.

FEBRUARY, 1977

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Las Vegas, Nev, Feb 3-8, 1977. Charles V Heck-MD, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN COLLEGE OF CARDIOLOGY, Philadelphia, Feb 28-Mar 3, 1977. William D Nelligan, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF NUCLEAR PHYSICIANS, New Orleans, Feb 9-13, 1977. K Nicolas, 1730 Pennsylvania Ave NW, Suite 1150, Washington, DC 20006.

AMERICAN COLLEGE OF PSYCHIATRISTS, Atlanta, Feb 2-6, 1977. JC Nemiah, MD, Beth Israel Hospital, 330 Brookline Ave, Boston 02215.

AMERICAN COUNCIL OF MEDICAL STAFFS, Washington, DC, February, 1977. JL Garcia-Oller, MD, 3422 Bienville St, New Orleans 70119.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb 6-9, 1977. BF Alfano, MD, Exec Sec, 675 Main St, Melrose, Mass 02176.

AMERICAN SOCIETY FOR SURGERY OF THE HAND, Las Vegas, Nev, Feb 1-3, 1977. JA Boswick, Jr, MD, Sec, University of Colorado Medical Center, 4200 E 9th Ave, Denver 80220.

ASPEN RADIOLOGY CONFERENCE, Aspen, Colo, Feb 28-Mar 4, 1977. Emanuel Salzman, MD, Conference Chairman, Division of Radiology, Beth Israel Hospital, Denver 80204.

■ FIRST DISTRICT MEDICAL SOCIETY, Pecos, Tex, Feb 7, 1977. LN Nickey, MD, 1515 N Oregon St, El Paso, Tex 79902.

INTERNATIONAL ACADEMY OF PROCTOLOGY, Kuala Lumpur, Singapore, Bali, Hong Kong and Taipei, Feb 17-Mar 7, 1977. Alfred J Cantor, MD, 96 Wildwood Rd, Great Neck, NY 11024.

TAOS MEDICAL SYMPOSIUM, Taos, NM, Feb 16-19, 1977. Thomas A Bodnar, Exec Dir, Albuquerque & Bernalillo County Medical Association, 2650 Yale Blvd SE #103, Albuquerque, NM 87106.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Corpus Christi, Feb 27-Mar 2, 1977. Robert E Monroe, Exec Sec, 4107 Medical Parkway #201, Austin 78756.

MARCH, 1977

AMERICAN ACADEMY OF ALLERGY, New York, Mar 26-31, 1977. DL McNeil, Exec Dir, 225 E Michigan St, Milwaukee 53202.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Durango, Colo, Mar 18-19, 1977. 2650 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN COLLEGE OF SURGEONS, Los Angeles, Mar 28-31, 1977. CR Hanlon, MD, Dir, 55 E Erie St, Chicago 60611.

AMERICAN MEDICAL ASSOCIATION NATIONAL CONFERENCE ON RURAL HEALTH, Seattle, Mar 30-Apr 1, 1977. AMA Department of Rural and Community Health, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL STUDENT ASSOCIATION, Chicago, Mar 30-Apr 3, 1977. LR Giancola, Exec Dir, 1171 Tower Rd, Schaumburg, Ill 60195.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 28-31, 1977. 1430 Tulane Ave, New Orleans 70112.

■ SOCIETY OF NUCLEAR MEDICINE, SOUTHWEST CHAPTER, El Paso, Mar 18-20, 1977. RJ Gorten, MD, 915 Strand, Galveston 77550.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Little Rock, Ark, Mar 16-18, 1977. Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

■ ST LUKE'S EPISCOPAL HOSPITAL/BAYLOR COLLEGE OF MEDICINE, 13th Annual Orthopedic Symposium, Houston, Apr 1-2, 1977. Alexander E Brodsky, MD, 505 Medical Towers Bldg. Houston 77025.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Houston, Mar 4-5, 1977. Iris Wenzel, 1801 N Lamar, Austin 78701.

■ TEXAS RADIOLOGICAL SOCIETY, Dallas, Mar 17-19, 1977. Iris Wenzel, 1801 N Lamar, Austin 78701.

■ UT SYSTEM MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Symposium on Fundamental Cancer Research, Houston, Mar 2-4, 1977. Stephen C Stuyck, MD, MD Anderson Hospital and Tumor Institute, Houston 77030.

APRIL, 1977

AMERICAN ACADEMY OF NEUROLOGY, Atlanta, Apr 25-30, 1977. Stanley A Nelson, Exec Dir, 4015 W 65th, Suite 302A, Minneapolis 55435.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Toronto, Apr 18-20, 1977. WT Maloney, 6 Beacon St, Suite 620, Boston 02108.

AMERICAN COLLEGE HEALTH ASSOCIATION, Philadelphia, Apr 19-22, 1977. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

■ AMERICAN COLLEGE OF PHYSICIANS, Dallas, Apr 18-21, 1977. EC Rosenow, Exec Vice-pres, 4200 Pine St, Philadelphia 19104.

■ AMERICAN COLLEGE OF RADIOLOGY, Houston, Apr 17-22, 1977. WC Stronach, Exec Dir, 20 N Wacker Dr, Chicago 60606.

AMERICAN GERIATRICS SOCIETY, San Francisco, Apr 13-14, 1977. 10 Columbus Circle, New York 10019.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Boston, Apr 24-28, 1977. Howard N Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN PEDIATRIC SOCIETY, San Francisco, Apr 25-29, 1977. David Goldring, MD, Sec, 500 S Kingshighway, St Louis 63110.

AMERICAN UROLOGICAL ASSOCIATION, INC, Chicago, Apr 24-28, 1977. Richard J Hannigan, Exec Officer, 1120 N Charles St, Baltimore 21201.

ARKANSAS MEDICAL SOCIETY, Little Rock, Apr 24-27, 1977. CC Long, MD, Exec Vice-pres, 214 N 12th, Box 1208, Fort Smith, Ark 72901.

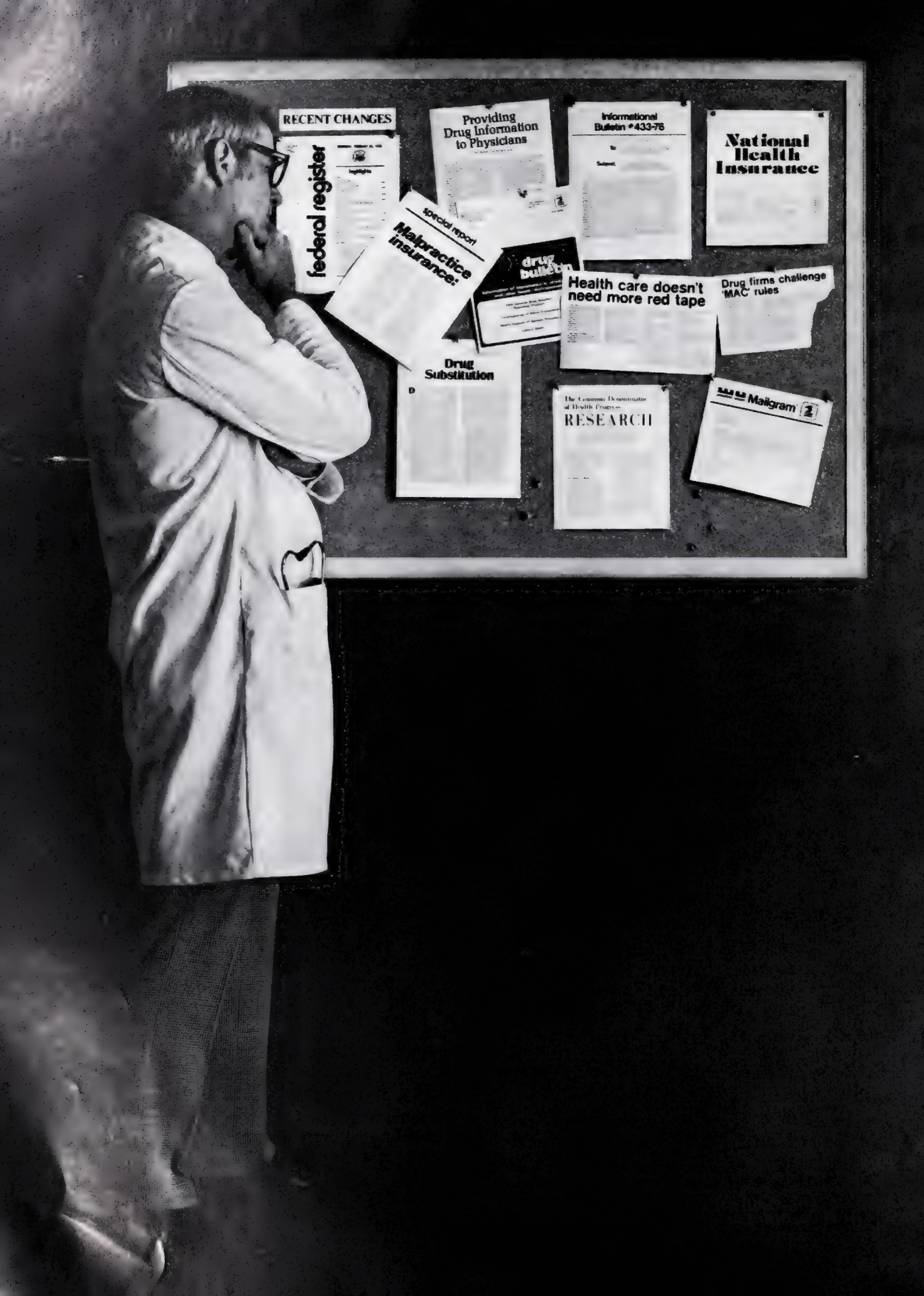
ARIZONA MEDICAL ASSOCIATION, Phoenix, Ariz, Apr 26-30, 1977. BE Robinson, Exec Dir, 810 W Bethany Home Rd, Phoenix, Ariz 85013.

ASSOCIATION FOR RESEARCH IN VISION AND OPHTHALMOLOGY, Sarasota, Fla, Apr 25-29, 1977. RD Reinecke, MD, Sec-Treas, Albany Medical College, Albany, NY 12208.

NEW YORK ROENTGEN SOCIETY, New York, Apr 28-30, 1977. TC Beneventano, MD, Sec-Treas, Montefiore Hospital and Medical Center, 111 E 210th St, Bronx, NY 10467.

NORTH AMERICAN CLINICAL DERMATOLOGIC SOCIETY, Monterey, Calif, Apr 17-24, 1977. EF Finnerty, MD, Sec Gen, 510 Commonwealth Ave, Boston 02215.

■ SOUTHWEST ALLERGY FORUM, Lakeway Inn, Austin, Apr 30-May 4, 1977. Theo S Painter, Jr, MD, Suite 107, Medical Park Tower, Austin 78705.


RECENT CHANGES
federal register
Providing Drug Information to Physicians
Informational Bulletin #433-76
National Health Insurance
special report
Malpractice insurance:
Health care doesn't need more red tape
Drug firms challenge 'MAC' rules
Drug Substitution
RESEARCH
Mailgram

THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

It could make a difference in your practice tomorrow.

P·M·A

Pharmaceutical Manufacturers Association
1155 Fifteenth Street, N.W., Washington, D.C. 20005

The one
the patient takes
is
never tested.
Surprising, perhaps, but it makes sense when you think about it.
Obviously, the actual dose of any prescription drug the patient takes cannot be tested because it would have to be broken down for analysis—after which it could never be used by a patient.
This means that you depend on the manufacturer for assurance that the dose the patient takes is identical to the ones which have been tested.
At each step in the manufacture of a Lilly drug, test after test confirms the ingredients, formulation, purity, and accuracy—all the critical factors that assure that every Lilly medicine is just what you ordered.
That's particularly important, as you know. The same drug made by different companies can be chemically identical yet may act differently in the human body because of the many variables in the way the drugs are manufactured.
And, of course, government standards alone do not assure the efficacy and consistency—the quality of each drug you prescribe.
As we at Eli Lilly and Company see it, the ultimate responsibility for quality is ours.
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Rheumatoid arthritis: an overview

Kenneth E. Sack, MD; Stuart H. Rosenthal, MD

Rheumatoid arthritis, although a disease of antiquity, continues to cause significant morbidity among the general population. It is, therefore, useful to review some of the characteristic features of this disorder as well as the currently accepted modes of therapy.

Definition

In general, rheumatoid arthritis is a symmetric, deforming arthritis with a predilection for young and middle-aged women, characterized by proliferation of synovium, destruction of adjacent cartilage and bone, and the presence of anti-IgG antibodies (rheumatoid factors). Since there are significant variations on this theme, it is essential to summarize some of the important clinical features of this disease as well as the standard criteria for making the diagnosis.

Criteria

Because of the variable nature of the disease, the American Rheumatism Association (ARA)[1] and the New York Academy[2] have developed criteria for the diagnosis of rheumatoid arthritis (summarized in Fig 1). Three or four of the ARA criteria are necessary for the diagnosis of "probable" and five or more for the diagnosis of "definite" rheumatoid arthritis. The New York criteria emphasize the symmetrical involvement of a greater number of joints and deemphasize joints predisposed to degenerative arthritis. These definitions are important in determining the prevalence of rheumatoid arthritis in our society. Using modified ARA criteria, O'Sullivan and Cathcart, studying an adult population in Sudbury, Mass, found that while the prevalence of probable or definite rheumatoid arthritis in 1964 was 3.8% for women and 1.3% for men, follow-up three to five years later revealed that 75% of these patients were normal. Using the New York criteria on the same population, the prevalence was 0.5% and 0.1% respectively, but only 33% were considered normal on follow-up.[3]

These data raise the question of whether rheumatoid arthritis is a relatively common but often benign disease, or rather an overly-diagnosed condition when considered by some of our current criteria.

1. Criteria for the diagnosis of rheumatoid arthritis.

American Rheumatism Association Criteria

1. Morning stiffness.
2. Joint tenderness or pain on motion.
3. Soft-tissue swelling of one joint.
4. Soft-tissue swelling of a second joint (within 3 months).
5. Soft-tissue swelling of symmetric joints (excluding distal interphalangeal joints).
6. Subcutaneous nodules.
7. X-ray changes typical of rheumatoid arthritis.
8. Serum positive for rheumatoid factors.
9. Poor mucin precipitation in synovial fluid.
10. Characteristic histologic changes in synovium.
11. Characteristic histologic changes in nodules.

In criteria 1-5 the joint signs or symptoms must be continuous for at least 6 weeks.
The above joint changes should be observed by a physician.
Three or four points = probable rheumatoid arthritis.
Five or more points = definite rheumatoid arthritis.

New York Criteria

1. History of episode of three painful limb joints.*
2. Swelling, limitation of motion, subluxation or ankylosis of three limb joints (must include a hand, wrist or foot and symmetry of one joint pair and must exclude distal interphalangeal joints, fifth proximal interphalangeal joints, first metatarsophalangeal joints, and hips).
3. X-ray changes (erosions).
4. Serum positive or rheumatoid factors.

*Count each joint group as one joint (for example, proximal interphalangeal joints) and score each side separately.

Clinical Features

Age of the patient is variable with onset ranging from approximately 20-60 years and a peak between ages 35 and 45.

Sex ratio of females to males affected is about two or three to one.[3]

The influence of genetics is unknown, but familial clustering is now being reported.[4]

Course of the disease can be benign but is often characterized by remissions and exacerbations resulting in progressive deformity.

Joints most frequently involved are the proximal interphalangeal (PIP), metacarpophalangeal (MCP), toes, wrists, elbows, knees, ankles, shoulders, hips, and temporomandibular. Involvement is usually symmetrical but this is not always the case, especially early in the disease. Joint pain, soft-tissue swelling, effusion, and limitation of motion may be present in varying degrees. When rheumatoid arthritis involves the spine there is a predilection for the cervical region, and atlanto-axial subluxation is not uncommon. If the distance between the anterior margin of the odontoid exceeds 2.5 mm with cervical flexion, subluxation should be suspected (Fig 2).[5]

Stiffness is characteristic following any prolonged period of inactivity. Morning stiffness must last longer than one-half hour to be considered significant.

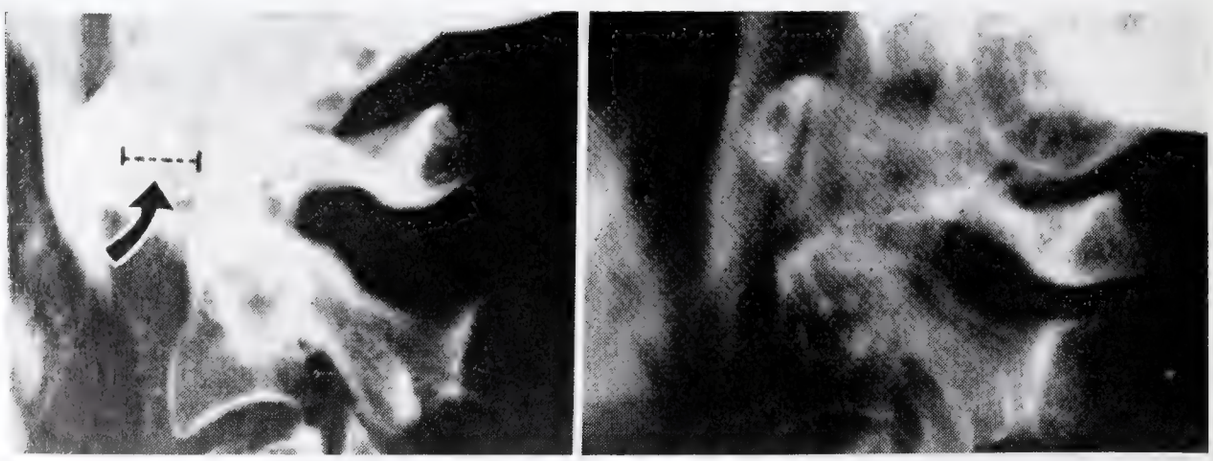
Systemic symptoms may include weight loss, fatigue, low-grade fever, and muscle weakness.

Extra-articular manifestations: Nodules are usually subcutaneous and often occur in areas of repeated trauma, for example, over the olecranon, Achilles tendon, or metacarpophalangeal joints. They may occur in tendons or other connective tissues. They may be transient and are usually asymptomatic. Treatment is usually unnecessary, but excision may be indicated if there is unusual pain or limitation of motion.

Lymphadenopathy is common and often found in patients showing positive results on serological examination. It frequently involves nodes draining affected joints.[6]

Ocular manifestations are as follows:

1. Anterior uveitis, a rare occurrence in adult rheumatoid patients, is more commonly seen in juvenile rheumatoid arthritis and ankylosing spondylitis.



2. Atlanto-axial subluxation. (Left) Flexion. (Right) Neutral. Reproduced with the permission of Dr. William Martel and Lea & Febiger.[5]

2. Episcleritis, scleritis, and scleromalacia perforans represent different degrees of scleral involvement. The acute varieties behave like a vasculitis, while the chronic lesions may represent a form of rheumatoid nodule.

3. The sicca syndrome, consisting of decreased lacrimal secretion, can lead to keratoconjunctivitis and may be considered part of Sjögren's syndrome. These complications require ophthalmologic consultation.

Laryngeal manifestations may be present. Cricoarytenoid joint disease is found histologically in more than 50% of patients. It occasionally causes hoarseness, dyspnea, stridor, or dysphagia, but is often asymptomatic.[7] Rarely, laryngeal obstruction has been observed, and it has catastrophic consequences.[8]

Pulmonary manifestations: 1. Pleural involvement has been reported in a high percentage of cases. It seems to be more common in men. The onset may precede the arthritis and its presence does not necessarily correlate with the severity of arthritis. It may be asymptomatic or present as chest pain, dyspnea, cough or fever. The pleural fluid is an exudate, often containing less than 25 mg/100 ml of glucose, decreased complement, and a positive rheumatoid factor.[9,10]

2. Interstitial pneumonitis may be asymptomatic, but up to 40% of patients with rheumatoid arthritis have abnormal diffusion and lung volumes. Roentgenograms of the chest may show changes consistent with interstitial pneumonitis or fibrosis. As with other pulmonary changes, it does not correlate with the severity of disease and may precede the onset of arthritis. Women with this involvement tend to have more severe arthritis, and men tend to be heavier smokers.[11]

3. Pulmonary nodules are not common. They are seen more often in seropositive men, and when associated with pneumoconiosis, they may present as multiple large nodules which can cavitate (Caplan's syndrome).[9,12]

Treatment of pulmonary manifestations is symptomatic. The lesions may subside spontaneously. However, severe involvement may necessitate the use of steroids.[9]

Cardiac manifestations: 1. Pericarditis may occur clinically in a small percentage of patients and is usually benign. Echocardiography has indicated asymptomatic pericardial involvement in about 50% of patients.[13]

2. Endocardial lesions can look like rheumatic heart disease, however clinical valvular disease is rare. Echocardiographic evidence of abnormal mitral valve motion is controversial.[13,14]

3. Myocardial lesions are probably uncommon. Mononuclear inflammatory cells and arteritis have been reported,[15] but their significance is unclear. Occasionally, granulomata cause valvular incompetence or conduction abnormalities.[16]

Neurologic manifestations: 1. Diffuse peripheral neuropathy or mononeuropathy, which may progress to mononeuropathy multiplex, is occasionally seen.[17] The cause is obscure, and the condition is often refractory to conventional treatment.

2. Entrapment neuropathies, such as atlanto-axial subluxation[18] and carpal tunnel syndrome are also seen.[19] The diagnosis may be confirmed by nerve conduction studies. Surgery is indicated if conservative measures are not successful.

Vasculitis: Arteritis can be demonstrated pathologically[20] or angiographically[21] in a significant percentage of cases. Clinical

involvement is less common and ranges from localized disease (for example, episcleritis, leg ulcers, digital lesions) to the rarer, but more lethal, multisystem disease.[22,23]

Normocytic, normochromic anemia involving diminished release of iron from the reticuloendothelial system is seen in rheumatoid arthritis as in other chronic diseases.[24] In addition, as a result of therapy (vide infra), a microcytic anemia secondary to gastrointestinal blood loss may be encountered.

Felty's syndrome: The picture is that of severe rheumatoid arthritis, splenomegaly and leukopenia. Other elements of pancytopenia may be present. It occurs in about 1% of patients with rheumatoid arthritis, although splenomegaly occurs in approximately 5-10%.[25] Splenectomy is indicated only for recurrent infections, severe hemolytic anemia or thrombocytopenic purpura.[26]

Extra-articular involvement suggests on-going activity of disease, and, with the possible exception of nodules and anemia, may be associated with increased mortality.[27]

3. Rheumatoid arthritis. Note tissue swelling, generalized loss of bone density, symmetric destruction of PIP joints (a), joint space narrowing of several MCP joints (b), marginal erosions (c), and poor definition of carpal bones.

Laboratory Diagnosis

Many of the laboratory abnormalities common in rheumatoid arthritis reflect the presence of chronic disease, for example, anemia (vide supra) and elevated acute phase reactants (sedimentation rate, C-reactive protein, alpha-2 and gamma globulins, fibrinogen, haptoglobin).

Rheumatoid factor is present in the majority of patients with adult onset rheumatoid arthritis. This is usually an IgM antibody with activity against IgG, although other antibodies have similar properties. It is commonly measured by an agglutination reaction involving an IgG-coated substance (latex particles, sheep red blood cells). As a rule, the latex fixation test is more sensitive but less specific than the sheep cell agglutination reaction in making the diagnosis of rheumatoid arthritis.[28] In most laboratories, a titer of 1/160 or greater is considered significant. Rheumatoid factor has been reported in a variety of inflammatory and infectious diseases as well as in the normal population and is, therefore, not of absolute diagnostic significance. Similarly, its absence should not mitigate against the diagnosis of rheu-

matoid arthritis in the presence of a typical clinical picture. In general, however, high titers of rheumatoid factor seem to be associated with rather severe disease and may also accompany certain complications of rheumatoid arthritis.[27]

Radiology

Soft tissue swelling from effusions or synovial thickening is a common early finding in rheumatoid arthritis. Uniform joint space narrowing due to cartilage loss, marginal erosions secondary to synovitis, juxta-articular osteoporosis, and eventually, subluxation and bony ankylosis are all part of the radiologic spectrum of rheumatoid arthritis. The presence of characteristic x-ray changes may lend support to making the correct diagnosis when the clinical picture is unclear (Fig 3).

Differential Diagnosis

In the acute stages, many of the arthritides can resemble early rheumatoid arthritis, but careful follow-up usually leads to the correct diagnosis. In the chronic stages the most frequent sources of confusion are probably osteoarthritis, gouty arthritis, psoriatic arthritis, systemic lupus erythematosus, and Reiter's disease (Figs 4-6). Careful attention to the previously mentioned details is mandatory for accurate diagnosis, but an occasional case will remain undiagnosed despite the most diligent effort.

4. Rheumatoid arthritis. Swelling, subluxation and ulnar deviation of the metacarpophalangeal joints. Note dorsal muscle atrophy. (Reproduced from the Clinical Slide Collection on the Rheumatic Diseases produced by The Arthritis Foundation, New York, copyright 1972.)

Treatment

The principles of therapy must include: relief of pain, prevention of deformities, maintenance of strength and function and, above all, education of the patient. This requires a multidisciplinary approach involving proper use of rest, physical therapy, medication, and surgery. A systematic progression beginning with conservative measures is the foundation of any treatment program for rheumatoid arthritis.

Rest: This is necessary for relief of both physical and emotional stress. In milder cases, it may simply require decreasing work load, afternoon naps, and a sound night's sleep. During a more severe flare, hospitalization may be necessary to provide the proper environment for recovery.

When a joint is acutely inflamed or lacks stability, immobilization or splinting is an important principle of treatment.

Physical Therapy: Heat is helpful for symptomatic relief of pain and stiffness. At home this may take the form of a morning shower or bath or a heating pad applied to a specific joint. The physical therapist may wish to use additional modalities such as paraffin baths, hydrocolator packs, Hubbard tanks, or ultrasound.

Exercise therapy emphasizing range of motion and preservation of muscle strength can help prevent deformity and preserve function, but it is important to

5. Degenerative joint disease. Bony enlargement in distal (Heberden's nodes) and proximal (Bouchard's nodes) interphalangeal joints. (Reproduced from the Clinical Slide Collection on the Rheumatic Diseases produced by the Arthritis Foundation, New York, copyright 1972.)

avoid stressing the acutely inflamed joint.

Medications: Aspirin continues to be the mainstay of drug therapy in rheumatoid arthritis. Eight to 12 tablets per day in divided doses is the usual starting regimen. It is helpful to administer these with meals or antacids in order to avoid gastric irritation and possible significant gastrointestinal bleeding. In some cases a higher dose may be indicated, and this may be accomplished by an increase of two tablets per day until relief of symptoms or signs of salicylism appear. Tinnitus is an early indication of aspirin toxicity and calls for a reduction in dose by 1 or 2 tablets per day. In general, plain or buffered aspirin is the preparation of choice.

Nonsteroidal anti-inflammatory drugs, such as indomethacin (Indocin) and phenylbutazone (Butazolidin) have been used as adjuncts to salicylate therapy with mixed success. While it may be useful to try these agents before moving to other treatment modalities, the potential benefit must be weighed against their known side effects.[29] The newly available propionic acid derivative, ibuprofen (Motrin), is probably anti-inflammatory in the higher dose range[30] but has as yet offered no clear advantage over salicylates. While it may be associated with fewer gastrointestinal side effects, it gives a less predictable therapeutic response and is, at present, much more expensive.

Gold is considered by most to be the therapeutic modality of choice following

6. Polyarticular gout with tophi (arrows) in a patient mistakenly diagnosed as having rheumatoid arthritis.

the use of anti-inflammatory agents. A response may be expected in a significant number of patients given this agent. The mechanism of action is not clear, but gold is known to inhibit lysosomal enzymes, reduce other connective tissue enzyme activity, bind to immune complexes, and is often associated with a decrease in the titer of rheumatoid factor.[31,32]

An initial test dose of 10 mg intramuscularly is given either as gold sodium thiomalate (Myochrysine) or sodium thioglucose (Solganal). If there are no adverse reactions, 25 mg is given in one week followed by 50 mg weekly thereafter. If no response is noted after 20 weeks (1 gm, total dose), there is usually no reason to continue, although some authors report a small number of additional responses if a higher dose is administered for three more months. If a favorable response has been achieved at this point, the dose interval usually can be increased to every other week and then gradually to as long as one month. Relapse may occur if the one-month interval is attained too early; therefore, close observation is in order during this transition.[32] The value of obtaining serum gold levels during therapy is still controversial,[33,34] but several authors suggest this may aid in achieving better clinical response and avoiding toxicity.[34,35] A complete blood count and urinalysis should be obtained prior to each injection in an attempt to pick up early adverse drug reactions (vide infra). Undesirable side effects occur in a significant percentage (about 30%) of patients treated with gold,[33] but these are usually transient and respond to temporary or permanent discontinuation of the injections depending on the reaction. There are essentially three important areas to consider concerning gold toxicity:

1. Dermatologic: Any lesion, especially if pruritic, or stomatitis should be considered a possible sign of gold toxicity. Occasionally, a biopsy is helpful in distinguishing a gold-related eruption from other lesions.[37] Gold should be discontinued or the dose decreased until the reaction clears. It may later be reinstituted at lower doses. Severe, exfoliative dermatitis necessitates permanent cessation of gold therapy.

2. Renal: Mild proteinuria may occur in patients with rheumatoid arthritis. The development of transient proteinuria may simply require close monitoring in the gold-treated patient. However, the sudden onset of proteinuria, especially in significant quantity, requires discontinuation of gold and, occasionally, the use of steroids.[38]

3. Bone marrow: Significant depression of blood-forming elements secondary to gold therapy is rare. However, severe thrombocytopenia, leukopenia and anemia with devastating consequences have been reported. There is some suggestion in the literature that this complication may be preceded by mild depression of any of the previously mentioned elements.[39] It is for this reason that careful following of blood counts is mandatory during gold therapy.

Hydroxychloroquine (Plaquenil) is occasionally used in an attempt to relieve symptoms. A response, if it occurs, may not be apparent for one to three months. Despite the low dose employed (200 mg/day) ocular toxicity is still a concern, and periodic ophthalmologic examinations are mandatory.[40]

Penicillamine has been shown to be effective in the amelioration of symptoms in a sizeable number of patients with rheumatoid arthritis. The side effects, however, are significant and have probably kept the use of this drug confined to those whose disease is progressive despite conventional therapy.[41] Newer low-dose regimens may make the use of penicillamine more common in the future.[42]

Steroids are known to reduce inflammation in the rheumatoid patient; however, because of major side effects associated with long-term use of these agents and the lack of prolonged benefit, their use should

probably be restricted to a low-dose, relatively short-term program in order to provide temporary relief while awaiting the effects of another medication (such as gold or hydroxychloroquine. Intermittent intra-articular steroid injection may provide relief for the acutely inflamed rheumatoid joint provided infection has been excluded.

Cytotoxic drugs (such as cyclophosphamide or azathioprine) have recently received considerable attention.[43,45] While they are effective in the induction of a clinical response in a large proportion of patients, the dose required to achieve control is usually in the range associated with significant side effects. The long-range effects of these agents, especially with regard to their neoplastic potential, are unknown. Their use should be restricted to the treatment of patients with refractory, progressive disease in the setting of a large medical center.

Surgery: The orthopedic surgeon may have an important role in the management of the rheumatoid patient. Restoration of function and relief of pain are the prime objectives in rheumatoid joint surgery. This may be accomplished by arthrodesis (joint fusion), osteotomy (cutting and remodeling of bone), or arthroplasty (use of prosthetic joints). Experience with the latter procedure has increased tremendously in recent years with excellent results reported for replacement of hips, knees, and joints of the upper extremities. The reader is referred to two recent articles in *Texas Medicine* for more specific information.[46,47]

The role of synovectomy in the rheumatoid joint is somewhat controversial. In general, this operation should be considered for the patient with normal articular cartilage but in whom evidence of continued synovitis exists despite medical therapy. The immediate effects of this procedure appear to be quite good, but the long-term results may be somewhat less promising.[48]

Etiology and Pathogenesis

It is postulated that immunoreactants in synovial fluid (for example, IgG and rheumatoid factors) activate complement and attract phagocytic leukocytes which ingest these complexes. Hydrolytic enzymes are thereby released stimulating a further inflammatory response.[49] Cellular and vascular proliferation in the synovial membrane results in a thickened, invasive structure (pannus) which is responsible for the erosive bone changes observed in the subacute and chronic states of the disease. The inciting agent for this entire process is unknown, but it is conceivable that in a susceptible host the presence of an infectious agent (bacterial or viral) is sufficient to initiate this sequence of events.[50,51]

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Dr. Sack, Assistant Professor; Dr. Rosenthal, Clinical Associate, Department of Internal Medicine, The University of Texas Medical School at Houston, Houston, TX 77025.

Sjögren's syndrome: current concept

John C. Barber, MD

Parts of Sjögren's syndrome have been described since 1882, but it was not until 1933 that Henrik Sjögren[1] recognized the classic triad of keratoconjunctivitis sicca, xerostomia, and rheumatoid arthritis. This was 41 years after Mikulicz described the histology of lymphocytic infiltration in simultaneous salivary and lacrimal gland enlargement. These two syndromes were considered different entities until 1953 when Morgan and Castleman[2] demonstrated the histologic similarity or identity of the disease processes, concluding that Mikulicz's syndrome was a subunit of Sjögren's syndrome.

The current classification, however, divides the disease into two subgroups. Sjögren's syndrome refers to all combinations of dry eyes, dry mouth, and connective tissue disease, whereas the occurrence of dry eyes and dry mouth without connective tissue disease is referred to as the sicca syndrome. This is of clinical importance since Talal[3] has shown that patients with sicca syndrome have a higher incidence of lymphoproliferative disorders than those with the full Sjögren syndrome.

Syndrome Characteristics

The eyes and mouth are not the only tissues involved by xerosis. Dryness of other mucous membranes may lead to dryness of the nasal passages, which causes discomfort, altered sense of smell, epistaxis, and even nasal septum perforation. Eustachian tube obstruction may cause otitis media and deafness. Laryngeal and bronchial involvement leads to hoarseness, bronchitis, cough, pneumonitis, and atelectasis. Skin dryness secondary to lymphocytic infiltration and atrophy of the sweat glands is not uncommon. Vaginal dryness occurs in up to half of the patients but may be related to estrogen deficiency in the age group involved.

The sicca components are quite variable. Keratoconjunctivitis sicca occurs in 95% of patients with sicca or Sjögren's syndrome.[4] Xerostomia is less common, occurring in about 70%, and a measured decrease in stimulated salivary flow occurs in only 50%.[4] Salivary gland enlargement is often episodic and unilateral and occurs in only one-fourth of the patients. Lacrimal gland enlargement and skin dryness are less frequent.

The third part of the triad has been expanded from rheumatoid arthritis to include all of the connective tissue diseases and many lymphoproliferative disorders. Approximately one-half of the patients with keratoconjunctivitis sicca and xerostomia have rheumatoid arthritis and an additional small percentage have other connective tissue diseases. These are often accompanied by hypergammaglobulinemia, rheumatoid factor, antinuclear antibodies, and other autoantibodies. Connective tissue diseases which have been associated with Sjögren's syndrome include systemic lupus erythematosus, polymyositis, periateritis, scleroderma, celiac disease, autoimmune thyroiditis, psoriatic arthritis, primary biliary cirrhosis, pernicious anemia, and Behcet's disease.

Approximately 90% of patients with Sjögren's syndrome are women between the ages of 40 and 60.[5] Most men with Sjögren's syndrome have rheumatoid arthritis. While 50% of patients with Sjögren's syndrome have rheumatoid arthritis, only 15 to 25% of patients with rheumatoid arthritis develop Sjögren's syndrome. About 2% of patients with sicca syndrome develop malignant lymphoproliferative diseases.[6]

Morgan and Castleman[2] described the histopathologic lesion of Sjögren's syn-

drome as a gradual lymphoid infiltration within the lobule leading to atrophy and loss of acinar tissue with complete replacement of the glandular tissue by lymphoid elements. There is also hyperplasia of ductal epithelium with gradual narrowing of the ductal lumens forming compact cellular units called myoepithelial islands. While this picture is characteristic it is not pathognomonic as several inflammatory diseases can cause a similar picture.

Since Rothman and associates[7] described reticulum cell sarcoma in a patient with long-standing Sjögren's syndrome in 1951 there have been many reports of lymphoproliferative disease associated with Sjögren's syndrome. These range from the lymphoid infiltrates confined to the glandular tissue, as previously described, to extraglandular extension of benign lymphoproliferation, to widespread lymphoreticular malignancy.

Diagnosis

Sjögren's syndrome should be suspected whenever a patient has sicca complaints, a connective tissue disease, or a lymphoproliferative disease. The diagnosis of Sjögren's syndrome currently requires the presence of two of the following: (1) keratoconjunctivitis sicca, (2) xerostomia or salivary gland enlargement, and (3) a connective tissue disease.[5] If only the first two are present, the term sicca syndrome is used, but the patient is considered to have the same disease as Sjögren's syndrome.

A careful history should include investigation of ocular, oral, and nasal symptoms of dryness; hearing problems; dysphagia; skin or vaginal dryness; cough; hoarseness; purpura; vitiligo; Raynaud's phenomenon; neuropathy; muscle weakness; drug allergy; preexisting autoimmune disease, including thyroiditis and pernicious anemia; and the presence of abnormal swelling of lymph nodes or other glands.

Keratoconjunctivitis Sicca

The most common presenting symptoms of dry eyes are foreign body sensation and burning, but dryness may manifest as tiredness, irritation by smoke or chemicals, chronic redness, transient visual blurring, pain, ropy ocular secretions, or mild itching. Examination may show interpalpebral vascular injection with particular pericorneal injection, irregularity of the light reflection from the cornea, decreased tear meniscus at the lower lid, debris in the tear film, or epithelial filaments on the cornea. Blepharitis caused by *Staphylococcus aureus* is found in two-thirds of patients with dry eyes and adds to the severity of symptoms. The presence of the *Staphylococcus* is shown by ring concretions on the lashes, ulceration of the skin in the lash line, mild lid margin erythema, and if the infection is severe, by subepithelial white corneal infiltrates.

The Schirmer test is helpful in documenting lacrimal function but is not reliable as a sole diagnostic test. Normal tear flow varies with age and sex so that a minimum normal value is difficult to establish. For young people, 15 mm of wetting of the paper strip in five minutes is considered normal. This value decreases to 5 mm in five minutes by age 80. Most patients become symptomatic when basal tear secretion falls below 5 mm in five minutes. To determine basal secretion the eye is anesthetized with topical drops several minutes prior to the Schirmer test to block reflex tearing.

A more clinically applicable method of detecting dry eyes is by rose bengal staining. Part of a drop of rose bengal is placed on the wooden end of an applicator stick and touched to the inside of the lower lid margin. Blinking spreads the dye, which stains epithelial cells that have been damaged by drying. Clinically important damage is seen as macroscopic red staining of the conjunctiva and cornea confined to the interpalpebral area. The extent of stain-

ing correlates well with the severity of the disease. Anesthetics and excessive manipulation must be avoided before rose bengal staining as they may cause false positive results. Care should be taken to use only part of a drop of dye, as a whole drop instilled directly into the eye may cause severe pain and overflow which stains the skin of the lids and face.

Normal tears contain lysozyme which is bactericidal to some bacteria. Its production in the lacrimal gland is lost early in the disease.[8] The presence of lysozyme can be tested by collecting tears on a Schirmer strip or by capillary tube and placing them on cultures of *Micrococcus lysodeikticus*, which is very sensitive to lysozyme.

Xerostomia

A history for xerostomia should include past or present salivary gland enlargement, increased fluid intake, continuous use of mints, oral soreness, abnormal taste, and dysphagia. Often a question on the ability to eat a cracker without something to drink will elicit positive history. Examination may show loss of salivary pooling or velvety appearance of the mucosa. The mucosa may be dry to touch and may even appear like parchment. Dental caries adjacent to the gingiva and on the incisional edges become severe and rapidly progressive. There may be loss of filiform papillae of the dorsal tongue with fissuring and erythema. *Candida albicans* is a frequent invader under these circumstances.

Documentation of decreased salivary gland function may be done in a number of ways. One of the better methods is by measurement of parotid salivary flow rate. This is done by applying a suction cup to the salivary duct to collect the saliva while the tongue is stimulated with lemon juice. Interpretation of results is complicated by the variation of salivary flow rate with age and sex. Hydrostatic sialography with the injection of radiopaque dye into the duct is more helpful late in the disease when it shows damage to the duct which has caused duct deformity. Biopsy of the parotid gland is considered dangerous, but labial biopsy of the accessory salivary glands shows the typical lymphocytic infiltration[9] and is the only test which shows the nature of the disease involving the salivary glands.

Other Organ System Involvement

The number of diseases that have been associated with Sjögren's syndrome continues to increase. As more research is done, the extent to which Sjögren's syndrome is known to involve the other organ systems becomes increasingly impressive. All of the major organ systems are affected by the lymphocytic infiltrations of this syndrome.

Chronic bronchitis with chronic productive cough occurred in more than half of the patients studied by Whaley and associates.[4] This was associated with restrictive ventilatory defects, pneumonia, and pulmonary fibrosis.

The gastrointestinal system involvement includes esophageal webs, atrophic gastritis, and pancreatitis. Liver diseases have been associated with Sjögren's syndrome, according to several investigators, and include active chronic hepatitis, primary biliary cirrhosis, and cryptogenic cirrhosis. Pernicious anemia has been found in Sjögren's syndrome and is associated with the presence of gastric parietal cell antibody.[10]

Lymphocytic infiltration of the kidney may lead to interstitial nephritis or renal tubular defects which cause renal tubular acidosis, uricosuria, phosphaturia, and amino aciduria.

Nervous system involvement includes cranial nerve dysfunction and peripheral neuropathy, probably secondary to arteritis in or near nerves. Several cases of myasthenia gravis have been reported. A

type of late-onset myopathy has been seen by several investigators.[11]

About 5% of patients with Sjögren's syndrome also have or have had Hashimoto's thyroiditis.[12] Both primary hypothyroid disease and simple goiter are also increased. Autoantibody studies have shown both thyroglobulin and thyroid microsomal antibodies.

Vascular problems include Raynaud's phenomenon, purpura, and arteritis. The Raynaud's phenomenon is not associated with cryoglobulins and affects one-fourth to one-third of patients. Up to 20% of patients with hyperglobulinemic purpura of the lower extremities will develop Sjögren's syndrome, although the Sjögren's syndrome may occur first. Both simple arteritis and polyarteritis nodosa have been found with Sjögren's syndrome, and arteritis is thought to be the basis for the neuropathies.

Normochromic or hypochromic anemia is fairly common and is more frequent with connective tissue disease than sicca syndrome. Leukopenia and eosinophilia are occasionally encountered.[13] The erythrocyte sedimentation rate is usually elevated and may be high. The lymphoproliferative disorder of Sjögren's syndrome may be mild and benign or fulminantly malignant. Hughes and Whaley[14] feel that the patient with Sjögren's syndrome who develops lymphoma has certain characteristics which distinguish his as a high-risk case. These patients have a sicca syndrome that is long-standing and severe with increased lymphadenopathy, splenomegaly, leukopenia, vasculitis, neuropathy, Raynaud's phenomenon and hyperglobulinemia, but arthritis is very mild or absent. They also have high titers of rheumatoid factor and other autoantibodies and may have a disproportionate increase in IgM as compared to IgG. Talal,[3] however, states that IgM is particularly high only when associated with Waldenström's macroglobulinemia, and tends to become abnormally low during the development of a lymphoma or reticulum cell sarcoma. A sudden drop in IgM may herald the presence or development of a malignant lymphoproliferation.

Immunologic changes are a definite part of Sjögren's syndrome and may be the common thread. The rate of occurrence of serum autoantibodies is exceeded only in systemic lupus erythematosus.[14] Hypergammaglobulinemia is almost always present and is usually polyclonal.[10] A monoclonal variety involving IgM is seen only in Waldenström's macroglobulinemia with Sjögren's syndrome. Rheumatoid factor is seen in 75% to 100% of patients, depending on the method of assay. This is true even in those without clinical arthritis. Antinuclear antibodies are found in two-thirds, whereas typical lupus cells are found in 10%.[5] Antibodies to native DNA are not found, which is useful in differentiating Sjögren's syndrome from systemic lupus erythematosus in which they are almost always found. Interaction between IgG and rheumatoid factor has produced large aggregates leading to a hyperviscosity syndrome in several patients.[15,16]

Etiology

The rapid expansion of the concept of Sjögren's syndrome has stimulated considerable research into the mechanism of this widespread and diverse disease. The many immunoglobulin changes and autoantibodies have given rise to an autoimmune theory that is now widely accepted.[17]

The histopathologic lesion is one of pronounced infiltration of the exocrine glands and other involved organs by lymphocytes. The excessive production of immunoglobulins IgG and IgM, but not IgA, indicates that these are B cell lymphocytes of remote peripheral origin such as spleen or lymph nodes. Immunofluorescence study of the infiltrates, however, indicates the presence of both T and B cell lymphocytes. T cell lymphocytes are known to regulate the B cell production of antibodies by both

stimulatory and inhibitory activity. Therefore, Sjögren's syndrome is possibly a T cell defect with loss of suppression of B cell proliferation and antibody production.

There is still some feeling that this is a slow virus disease.[13] This is prompted by the fact that viral disease exists in mice which is clinically and histologically similar to Sjögren's syndrome in humans, and by the observations by several investigators of so-called virus-like particles, tubular arrays, and tubuloreticular structures. Histologic studies have not confirmed the viral nature of these particles.

There is yet another theory which combines both of the previously mentioned theories.[6] This theory invokes a chronic intense stimulation initiated by an unknown stimulus, possibly a slow or latent virus, which alters self antigens and thereby evokes an immune response. The localized response could become generalized with extraglandular extension. Exhaustion of the lymphoproliferative system could lead to neoplastic transformation or dedifferentiation to blast cells.

Treatment of Keratoconjunctivitis Sicca

The treatment of keratoconjunctivitis sicca is determined by the degree of damage and the symptoms of the patient. Low Schirmer test values are not adequate justification for treatment in the absence of epithelial damage or symptoms. The majority of patients with Sjögren's syndrome will respond well to any artificial tears, since in most cases only the aqueous tear layer is depleted. In advanced cases in which the mucus is abnormal and has poor wetting qualities, an artificial tear with mucin-like wetting qualities such as Adapette, Adsorbotear, or Tears Natureale may give better results. In patients for whom artificial tears are ineffective, a thermal closure of the lacrimal puncta may allow sufficient pooling to alleviate symptoms. The lids should be cultured for *Staphylococcus* since it occurs in two-thirds of dry eyes and must be eradicated for complete relief of discomfort.

If symptoms persist, a therapeutic soft contact lens can be used to protect the cornea and keep it moist. Care must be taken to keep the lens from drying and to avoid infection. The lens wetness is maintained by frequent saline drops. A 5% solution of N-acetylcysteine (Mucomyst) may be used once or twice daily to prevent the mucus buildup on the soft lens.

When soft lenses are ineffective or cannot be worn, Saran Wrap occlusion of the eye may be tried to prevent tear evaporation. A piece of Saran Wrap is applied to the face from brow to cheek and from temple to temple. Some patients prefer diving goggles to obtain a 100% humidity for the eye. A partial tarsorrhaphy may decrease tear evaporation sufficiently to prevent damage and relieve discomfort with or without artificial tears.

If all else fails, an electrolytic pump can be used with percutaneous or spectacle-supported plastic tubing to supply artificial tears to the eye at a slow continuous rate. This is used only as a last resort as the logistics of the system greatly limit its use.

Parotid duct transplant to the conjunctiva is usually unsuccessful in this disease because of parotid involvement by the disease. In patients whose mouth is not dry, a parotid duct transplant leads to too much tear flow at meal times and too little between meals.[18]

Use of chronic topical steroid therapy is to be avoided or done with extreme care to prevent corneal perforation. Chronic use of steroids which enhance corneal collagenase activity has led to quiet formation of descemetocele and corneal perforation.[19]

Diuretics, belladonna alkaloids, antihypertensives and some antidepressants may decrease lacrimal gland function and should be avoided or kept to a minimum.

Mild cases of xerostomia may respond to increased or frequent fluid intake. If

this fails, a 2% solution of methylcellulose or glycerin lozenges may be tried. Whaley and associates[4] suggest a mouthwash containing citric acid (25 gm), essence of lemon (40 ml), and glycerin (sufficient to bring to 2 liters). This both stimulates saliva production and lubricates the mouth.

Scrupulous oral hygiene must be employed to decrease dental caries and avoid extensive dental problems.

Nasal dryness is best treated with saline drops or soaks. Oily drops are to be avoided as they may cause aspiration lipoid pneumonia.

Patients with dysphagia should be checked by barium swallow for an esophageal web, although dysphagia may be secondary to lack of saliva.

Skin dryness may be treated with moisturizing agents as needed and vaginal dryness usually responds to estrogens or moisturizing agents.

The many diseases associated with Sjögren's syndrome should be treated in the manner appropriate to the disease, as though Sjögren's syndrome were not part of it.

Conclusion

When treating the sicca syndrome in any patient, but most especially in the young person, it is important to remember that numerous other systems may be involved. It may be the first indication of an underlying connective tissue disease or lymphoma. A thorough work-up should be performed with the associated pathologic conditions in mind. Laboratory tests should include erythrocyte sedimentation rate, complete blood count, serum protein and protein electrophoresis, rheumatoid factor, and antinuclear antibodies.

It is important to follow patients with Sjögren's syndrome, especially those with severe sicca syndrome without arthritis, for the development of lymphoproliferative malignancy.

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Dr. Barber, Department of Ophthalmology, The University of Texas Medical Branch, Galveston, TX 77550.

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Transsphenoidal microsurgery for selective removal of functional pituitary microadenomas

Karl D. Nielson, MD; Kemp Clark, MD

Late manifestations of pituitary tumors are well known to most physicians. Until comparatively recently, treatment was designed for removal of mass lesions. Most pituitary surgery or radiation was performed on patients demonstrating signs and symptoms of rather large tumors. Surgery was done transcranially. Stigmata of advanced acromegaly, Cushing's disease, and visual field deficits from chromophobe adenomas of sufficient size to encroach on the optic chiasm were, and remain, the prime indications for pituitary surgery. Recent endocrinological and neuroradiological advances have made possible detection of small, minimally symptomatic hypophyseal tumors in early stages of their development. In parallel, the development of transsphenoidal neurosurgery has evolved for treatment of these tumors. These technological advances bring with them the added responsibility for primary physicians and internists to increase their clinical index of suspicion and diagnostic acumen to detect patients with such treatable pituitary tumors.

Transsphenoidal surgery has become the safest and most effective procedure in the management of pituitary tumors. Developed in 1905[11] and improved during the next few years,[8] this technique was used by Cushing for many of the patients in his large series.[3] He abandoned it because of poor visualization and a high incidence of postoperative cerebrospinal fluid (CSF) rhinorrhea and meningitis. The use of the operative microscope, televised fluoroscopy, and microneurosurgical instruments and techniques have revivified the operation. Guiot,[6,7] initially, and Hardy,[9,10] have made important contributions to the development of the present transsphenoidal operation. This approach has been used on the Neurosurgical Service in Southwestern Medical School almost exclusively during the past three years. Transcranial surgery has been reserved for large or eccentrically placed tumors. Twenty-nine cases of pituitary tumors have been operated upon. These include 10 cases of nonhormonally active chromophobe adenomas, and 19 functional adenomas. This latter group includes 15 growth-hormone-secreting tumors, three prolactin-secreting neoplasms, and one adrenocorticotropin-secreting tumor. In addition to our patients with tumors, three patients with CSF rhinorrhea[14] have undergone successful transsphenoidal surgery, and three patients have undergone transsphenoidal hypophysectomy for palliation of metastatic carcinoma.

Each patient in this series was referred by the Department of Obstetrics and Gynecology or the Department of Internal Medicine. Thorough endocrinological evaluation had been done before referral. To this was added sellar polytomography in two planes, fractional pneumoencephalography, and occasionally cerebral arteriography.

Technique of Surgery

The patient is placed in a semisitting position with the head turned slightly towards the operator. A mobile C arm radiofluoroscopic image intensifier is placed to allow a lateral view of the sella turcica on the television monitoring screen. The image intensifier is activated briefly as the vomer bone is approached, but more frequently as the transsphenoidal and intrapituitary phases of the operation are performed. This provides rapid and safe access to the desired site, with close monitoring preventing improper placement of instruments laterally near the cavernous sinus or too deeply through the diaphragma sellae into the optic chiasm or brain stem.

The operating microscope is placed within the circle of the image intensifier arms for visualization of the opened sphenoid sinus and the sellar contents.

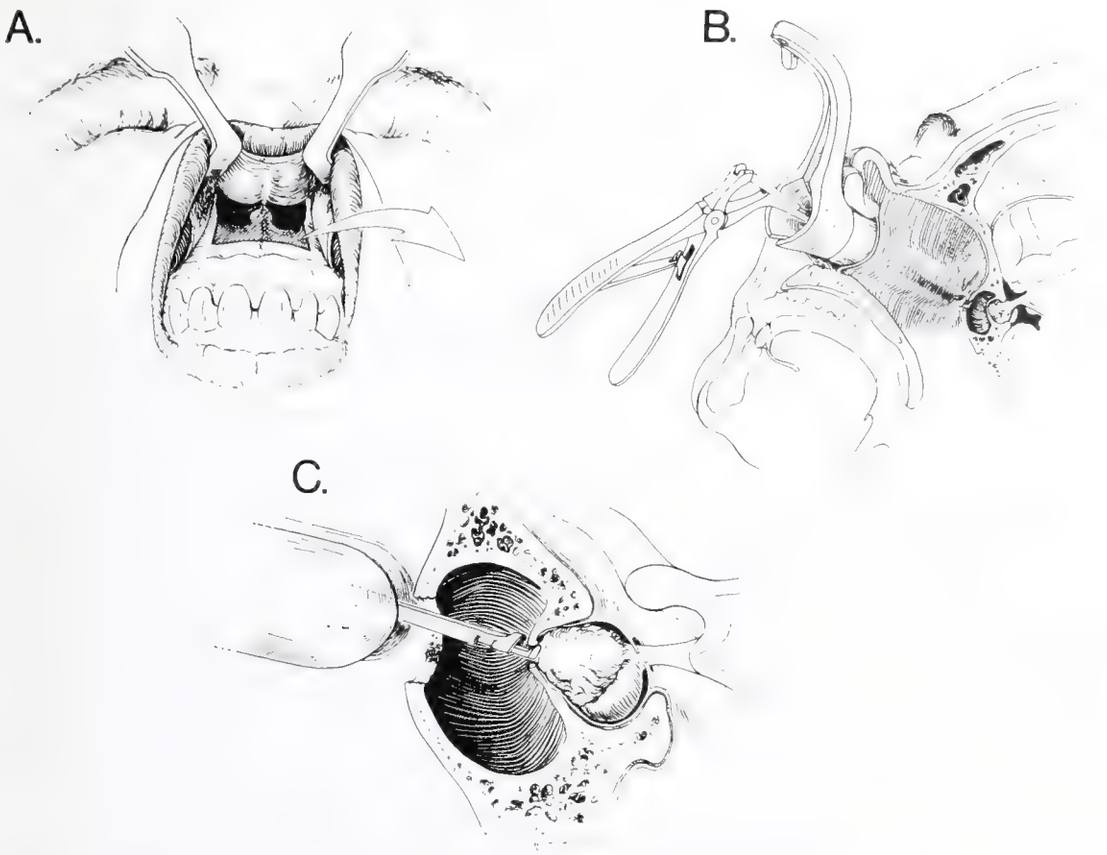
General endotracheal anesthesia was used in all cases. The oral-pharyngeal cavity is packed with moistened 2-inch gauze. The patient's face below the eyes, his nasal cavities, and upper gingiva are cleaned with Betadine solution. The medial and inferior nasal mucosa and the upper anterior oral gingiva and mucosa are infiltrated with sterile normal saline solution containing aqueous epinephrine in a concentration of 1:250,000. A small area on the anterolateral right thigh is draped separately after routine surgical preparation to obtain fascia lata femoris and muscle for packing the opened pituitary fossa at closure.

A horizontal incision is made through the mucosa of the upper lip from one canine fossa to the other. The upper maxillary ridge and frontal nasal spinous process are exposed by submucosal elevation with staphylorrhaphy dissectors (Fig 1A). The maxillary ridge and the frontal nasal spinous process are removed with a small, sharp osteotome. A submucous resection of the inferior one-third of the cartilaginous nasal septum is performed. The mucosa should be elevated intact as perforation may allow potential contamination. A bivalve nasal speculum, directed towards the floor of the sphenoid sinus under fluoroscopic control, is inserted into the submucosal cavity thus created. The septum is removed sharply with a swivel or piecemeal with small Jansen-Middleton rongeurs. A larger Cushing transsphenoidal self-retaining retractor is substituted for the nasal speculum after the vomer is exposed (Fig B). The keel-shaped vomer is detached by grasping it with a pituitary rongeur. This bone is saved, as are the portions of the septum, to insert in the open floor of the pituitary fossa during closure.

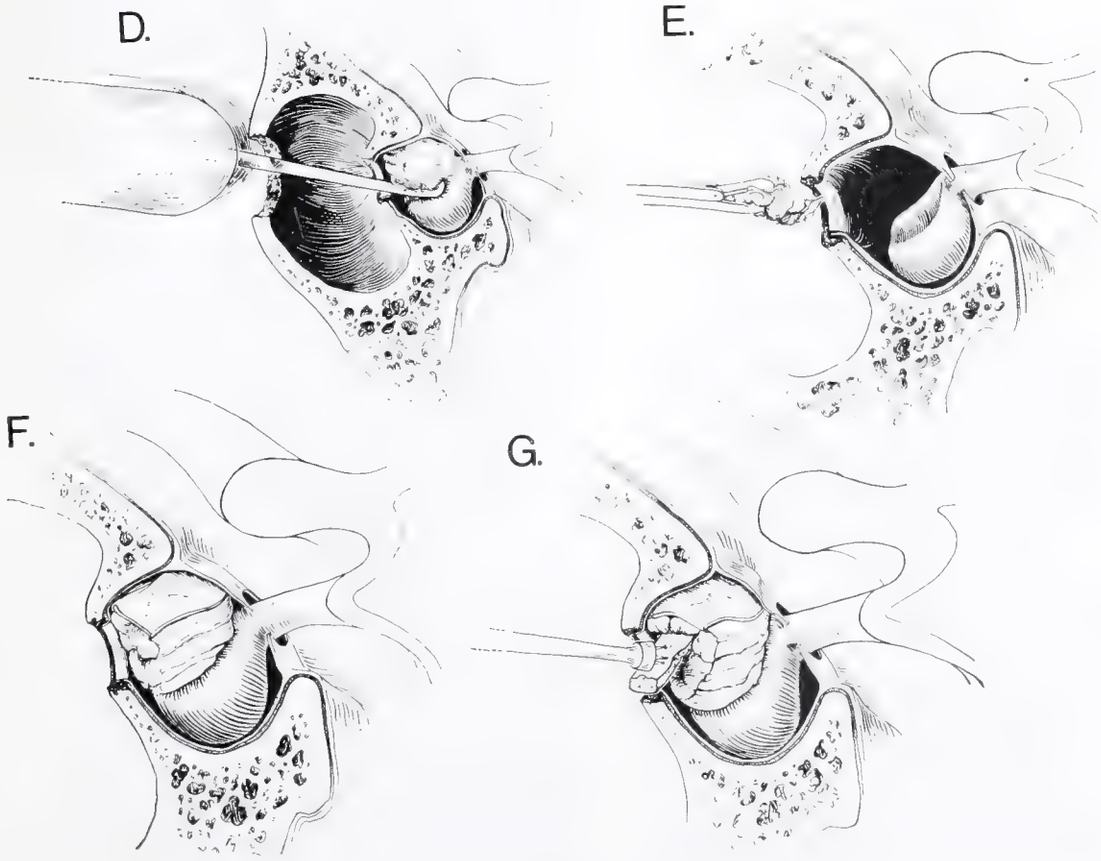
The operating microscope is brought into use at this time, and the remainder of the operation is performed using magnified three-dimensional vision. The excellent illumination provided is most beneficial. Further removal of the floor of the sphenoid process is done with the Kerrison punch. The suction cautery is employed to exenterate all visible sphenoid sinus mucosa.

Access to the anterior and inferior sections of the floor of the sella is gained. A midline window is made in the sella floor with a small osteotome. Bone is then resected until an adequate opening for intrasellar manipulation is provided (Fig 1C). This is usually about a 1 to 1.5 cm opening. The dura in the sella is protected to permit a controlled opening of the gland. A transverse or T-shaped dural incision is made and the dura is separated from the pituitary gland. A small adenoma, or totally replaced adenomatous pituitary gland, may extrude itself, separating easily from the firm, normal anterior pituitary parenchyma. Sometimes it is necessary to separate a firm adenoma or microadenoma from the gland with blunt instruments (Figs 1D and E). We routinely save specimens of our hormonally active pituitary tumors for routine pathological studies, electron microscopy, and cell culture.

Closure is simple. Muscle and fascia lata, obtained from the thigh, are placed in the pituitary fossa (Fig 1F), and secured by a piece of cartilaginous septum or vomer, slightly larger than the opening in the sella. This bone is inserted under the rim of opened sellar floor (Fig 1G). This maneuver helps prevent CSF leakage by keeping the muscle from falling into the submucous space. The nose is packed with a



1. A-C. Illustrating the approach, sublabially and through the sphenoid sinus.



D-G. The technique of tumor removal and of closure of the sella.

gauze strip soaked in antibiotic ointment. Closure of the labial mucosal incision is optional.

Results

In the group of 15 patients with acromegaly, postoperatively all but four patients achieved normal growth hormone levels (less than 5 ng/ml). Two of the four had growth hormone levels below 10 ng/ml, and the other two achieved near normal levels after reoperation. The patients with prolactin-secreting tumors have shown decreasing levels of prolactin (starting with greater than 120 ng/100 ml at the height of the disease) and decreased galactorrhea, but have not achieved normal prolactin levels (less than 20 ng/100 ml). Two patients in the entire series had nausea, vomiting, and low serum sodium and potassium levels transiently one week postoperatively. This was easily corrected by fluid and electrolyte therapy. There were no other complications to date (August 1975).

Discussion

Clinical cases of excessive secretion of anterior pituitary mediated hormones have been reported which involve prolactin (galactorrhea, amenorrhea, and infertility), ACTH (Cushing's disease and Nelson's syndrome), somatotrophic hormone (gigantism and acromegaly), rarely thyrotropin (hyperthyroidism), and even more rarely excessive follicle stimulating hormone (FSH) associated with eunuchoidism. The present series includes the first three types. Our experience with acromegaly will be published in detail separately.[16] Well established and reproducible assays are available for each pituitary hormone; and in combination with provocative and suppressive tests, it is now possible to diagnose secreting tumors with accuracy and confidence. Polytomography of the sella in two planes is the initial step in determining if a microadenoma is the source. Selective angiography with substraction and magnification, and pneumoencephalography (especially with polytomography) are most helpful procedures in further evaluation of the patients.

The establishment of the diagnosis of a hypersecreting tumor is usually indication for its surgical removal. No other therapy is capable of returning the patient to a normal endocrinologic status in a large number of cases. Transsphenoidal surgery for such tumors allows successful removal of the functional adenoma and preservation of normal pituitary function in a gratifying number of patients. This series of transsphenoidal operations, like others, is free of significant morbidity with no mortality to date (August).[1,2,4,6,7,9,10,17]

Prolactin-secreting adenomas are the most frequently diagnosed functional pituitary neoplasms, and represent perhaps 25% of all pituitary tumors.[12,15] In the past they have not been treated surgically because craniotomy and complete hypophysectomy entail excessive risk. First described in 1954, sometimes called the Forbes-Albright syndromes,[5] the syndrome of nonpuerperal galactorrhea, amenorrhea, low urinary FSH levels, and infertility should alert the physician to the possible existence of a microadenoma. Baseline serum prolactin levels greater than 25ng/ml (N = 10-20ng/ml), and failure of phenothiazine drugs to induce a significant rise in prolactin levels establish the diagnosis. Transsphenoidal surgery allows removal of the adenoma with preservation of normal pituitary function and reversal of the clinical signs. Our three cases illustrate this point.

These tumors (usually acidophilic adenomas) are present in both men and women. Surgery may be indicated in patients strongly desirous of fertility, and in order to avoid the annoyance of galactorrhea and amenorrhea. Radiation therapy and drugs have been ineffective. The ultimate role of surgery is yet to be fully determined. However, at the present state of the art, we recommend that primary physicians, internists, and gynecologists or other practitioners who encounter infertility, menstrual irregularities (especially secondary amenorrhea), or who discover galactorrhea during breast examination, evaluate their patients with routine skull and hand films, sellar polytomography, and thorough endocrinological evaluation.

Somatotropic (growth) hormone results in gigantism in prepubertal patients and in acromegaly thereafter. Correct and early diagnosis is possible because of the availability of human growth hormone assay. Significant morbidity and shortening of life complicate the courses of patients with these tumors, making effective treatment clearly indicated.

Early clinical clues which should alert the primary physician are complaints of fatigue without apparent cause, mild or equivocal adult onset diabetes mellitus or hypertension, coarsening of facial features, enlargement of hands (especially glove or ring size), and enlargement of the head (hat size). Comparison of the patient with his old photographs may be illuminating to both the patient and his physician. X-ray evidence of enlarged mandible, hands, and frontal sinuses advance the clinical suspicion. Again,a high index of suspicion on the part of the physician regularly seeing such a patient for varied problems may indeed save the patient extended morbidity and even earlier than expected demise by detecting early subtle changes of endocrine dysfunction. Serious diabetes, bone, muscle, and cardiovascular disease are late manifestations.

Transsphenoidal surgery is the preferred treatment. Standard irradiation therapy does not reduce growth hormone levels to normal and bring the disease under control. Heavy particle irradiation appears to be effective but is available in only a few centers. The long-term effects of such radiation on surrounding tissues is unsure. Other surgical methods, such as cryosurgery, are less sure, or, like craniotomy, less safe than transsphenoidal microsurgery.

Cushing's syndrome may be caused by multiple sources of increased adrenal corticosteroids. Cushing's disease, which is hypersecretion of pituitary adrenocorticotropic hormone, is most likely due to a functional microadenoma of the anterior hypophysis. Cushing's syndrome, on the other hand, may be due to adrenal hyperfunction or adenomas. Early clinical suspicion on the part of the primary physician should be aroused by patient's reports of fatigue, change in body habitus toward centripetal obesity, polyuria, polydipsia, hyperthyroidism. Somewhat later, the patient may demonstrate the classical moon facies, abdominal striae, and diabetes characterizing the full Cushing's syndrome. The early symptoms are certainly common ones, but if patients are to be saved the serious consequences of advanced disease, more early attention needs to be paid to such constellations of symptoms and signs. Many confirmatory endocrinological tests can be performed outside the major medical centers. Cushing's disease can be differentiated from Cushing's syndrome by determination of elevated serum ACTH and by the dexamethasone suppression test. Corticosteroid is suppressed when high doses of

dexamethasone are given for several days if an adrenal adenoma is present. If a pituitary adenoma is present, transsphenoidal excision is the treatment of choice.

Nelson's syndrome,[13] consisting of elevated ACTH levels and related skin hyperpigmentation, occurs in a small percentage of patients following bilateral total adrenalectomy for Cushing's syndrome. Long-term followup by the primary physician with care taken to document increase in skin color after the patient leaves the major center may be the first or only chance to detect early changes of this serious condition. A pituitary microadenoma, probably present before adrenalectomy, is the cause. Again, the transsphenoidal approach is, by all criteria, the treatment of choice.

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Dr. Nielson, Southwestern Medical School, Division of Neurosurgery, 5323 Harry Hines Blvd, Dallas, TX 75235.

Dr. Clark, Professor and Chairman, Division of Neurosurgery, Southwestern Medical School.

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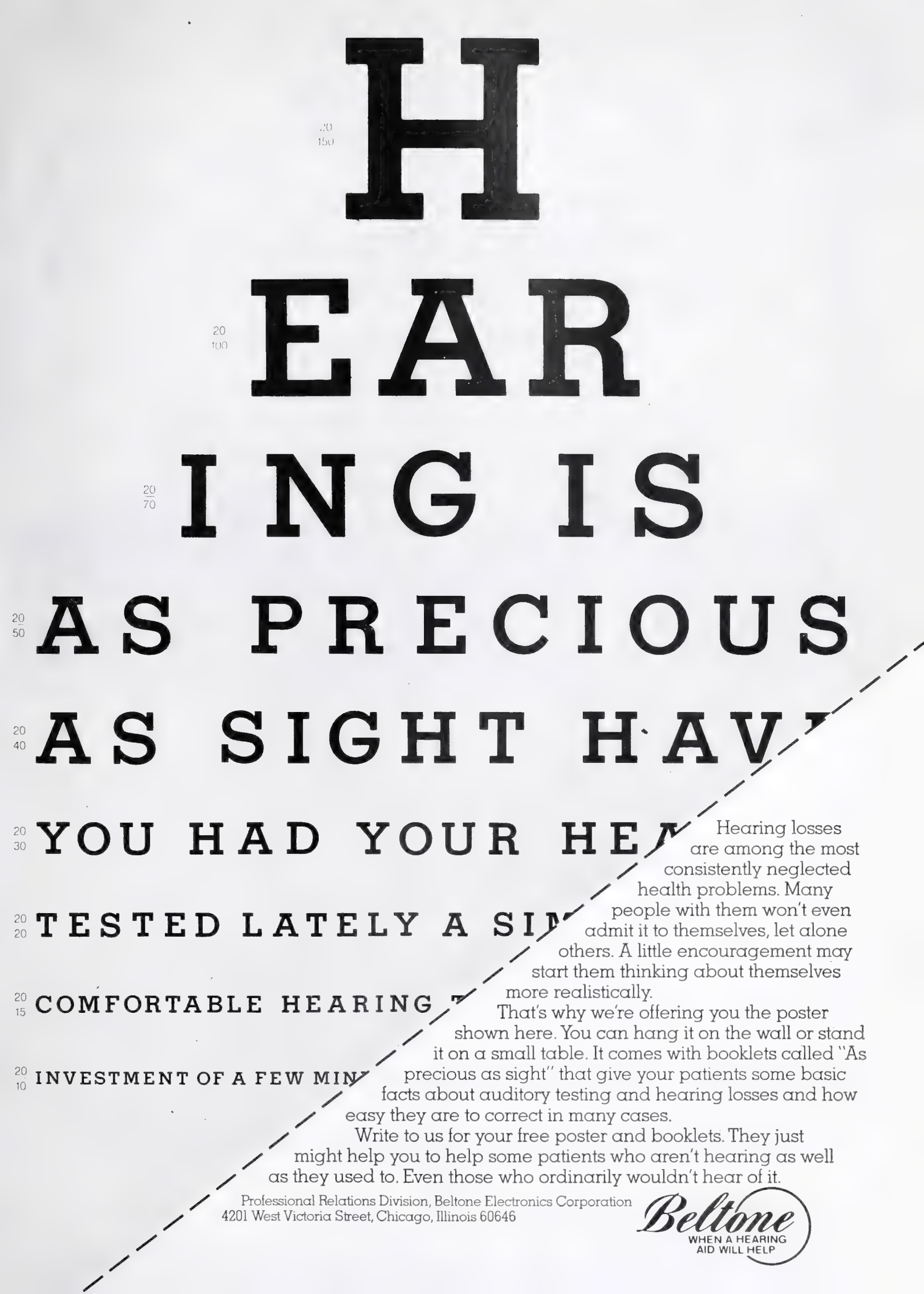

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Narrowing down pneumonias

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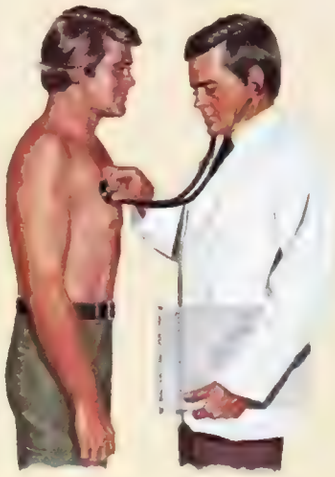
Bacterial or nonbacterial?

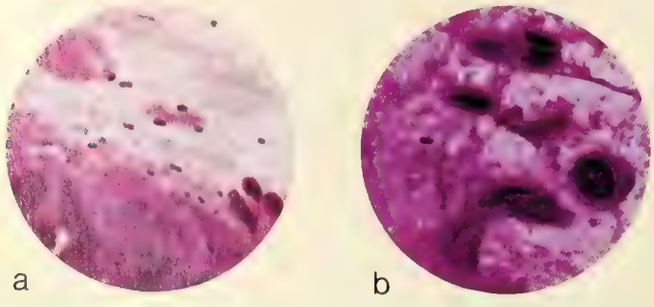
In the early stages of mild to moderate pneumonia, it is often difficult to reach an accurate bacteriologic diagnosis. A tentative differentiation may be made on history-taking, physical examination, CBC with differential analysis, and microscopic study of the sputum smear. Specimens should be obtained for culture and sensitivity testing, but when a bacterial pneumonia is diagnosed, therapy is often instituted before the etiological agent is positively identified.



Bacterial pneumonias may have a sudden onset with a shaking chill, rapid development of fever, pleuritic pain, and cough productive of rust-colored sputum. The Gram-stained sputum smear generally shows polymorphonuclear neutrophils as well as a predominance of the causative organisms. These are likely to be *Streptococcus pneumoniae,* still by far the most frequently encountered agent in bacterial pneumonia.[1] The CBC reveals marked leukocytosis with a shift to the left.

In *nonbacterial pneumonias*—mycoplasmal or viral—classical symptoms tend to develop more slowly, with myalgia, lassitude, and headache predominating. Sputum production is usually scanty, and the sputum smear is relatively uninformative, showing gram-positive cocci and other organisms which are part of the normal pharyngeal flora. The leukocyte count is normal or slightly elevated.

Direct Gram-stained sputum smears. (a) Pneumococcal pneumonia—note abundant polymorphonuclear leukocytes, as well as gram-positive diplococci. (b) Nonspecific—consistent with viral or mycoplasmal pneumonia. Note large mononuclear cell, as well as a few polymorphs and mixed bacterial flora (pharyngeal contaminants).



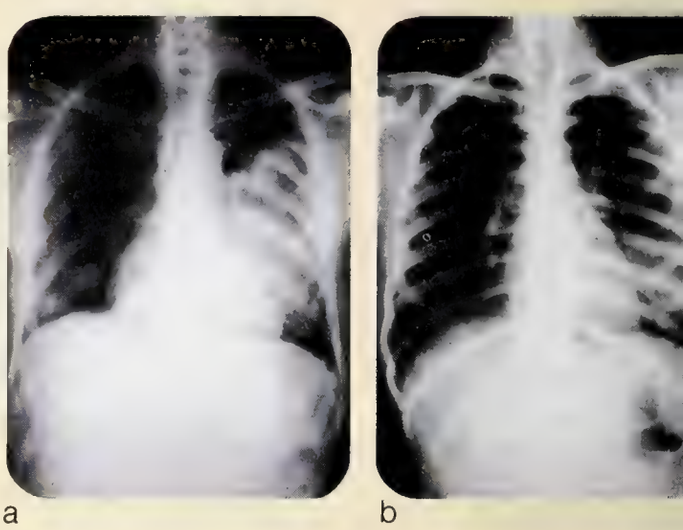
a b

Mycoplasmal or viral?

Differentiation between mycoplasmal and viral pneumonias may be impossible in the acute stage

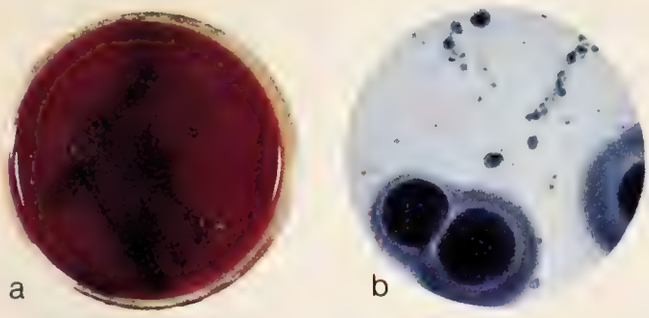
Serologic testing and culture methods for *Mycoplasma pneumoniae* are complex and time-consuming, taking as long as two weeks after obtaining samples. The sensitivity and specificity o the test for cold agglutinins have been questioned. The complement-fixing antibody test may reflect previous infection. Furthermore, facilities for culturi *M. pneumoniae* are not widely available.[3]

If treatment is to be initiated, therefore, it may b necessary to start on the basis of a *presumptive* diagnosis of mycoplasmal pneumonia.[1-3] In reachi such a diagnosis, the physician relies on clinical judgment, considering such factors as the age of th patient and the history of exposure. For example, *Mycoplasma pneumoniae* is considered the most common cause of pneumonia among ambulatory patients aged 20 to 35.[1]



a b

Chest x-rays of patients with (a) pneumococcal pneumonia—classically heavy, extensive infiltration of left lung; (b) mycoplasmal pneumonia—mild infiltrate confined to left lower lobe. Roentgenography usually does not help in differential diagnosis, since both types of pneumonias may present with a wide spectrum of x-ray as well as clinical findings.



(a) Distinct mucoid colonies of type 3 pneumococci *(Streptococcus pneumoniae)* on sheep blood agar showing greenish discoloration (alpha-hemolysis) of medium. (b) Typical "fried-egg" colonies of *Mycoplasma pneumoniae* consisting of dense central core with lighter periphery. Cultural and serologic methods for detecting *M. pneumoniae* are complex, time-consuming, and not widely available.

Expectant therapy

n the patient with a presumptive diagnosis of nycoplasmal pneumonia or bacterial pneumonia, it nay be desirable to initiate antibiotic therapy before ulture and sensitivity results are available.

A course of erythromycin or tetracycline is considered effective in the treatment of mycoplasmal pneumonia to help speed the clearing of infiltrate and shorten the duration of symptoms.[1,3] In pneumococcal pneumonia, erythromycin is an effective alternative to penicillin, the drug of choice. A recent report, based on data from 200 hospitals of 100 beds or more, found 98% of *S. pneumoniae* sensitive *in vitro* to erythromycin.[4]

Among these therapeutic agents, only erythromycin provides effective coverage of both *Mycoplasma pneumoniae* and *S. pneumoniae*. The penicillins are not effective against *Mycoplasma*, and *S. pneumoniae* has shown a relatively high incidence of resistance to tetracycline.

When erythromycin is selected for therapy, E-Mycin (erythromycin enteric-coated tablets, Upjohn) s a good choice. E-Mycin is administered and absorbed as active erythromycin base, and may be taken q.i.d., q 6h, or b.i.d., immediately after meals or between meals. Thus, patients can use mealtimes to help them remember their medication. The enteric coating on E-Mycin tablets helps ensure efficient absorption in the intestinal tract, and bioavailability studies show that E-Mycin can be expected to produce predictable, acceptable blood levels. The low cost of E-Mycin helps assure economical therapy.

E-Mycin rarely causes serious side effects and is not associated with liver toxicity.* The most frequent side effects are upper gastrointestinal, such as abdominal cramping and discomfort, and are dose-related. Nausea, vomiting, and diarrhea occur infrequently with usual oral doses. Serious allergic reactions, including anaphylaxis, have rarely been reported.

*Use cautiously in patients with severe liver impairment

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Please turn page for brief summary of prescribing information.

Summary

Because pneumonias may be difficult to differentiate at the outset, treatment is often initiated before a causal diagnosis is made. However, readily available diagnostic criteria occasionally allow early differentiation between bacterial and nonbacterial pneumonias. When the diagnosis appears to be nonbacterial pneumonia, further differentiation between mycoplasmal pneumonia and viral pneumonia is more complex and time-consuming. Therefore, therapy is often initiated on the basis of a *presumptive* diagnosis of mycoplasmal pneumonia.

Erythromycin is an effective antibiotic against *Mycoplasma pneumoniae, Streptococcus pneumoniae,*† and *Streptococcus pyogenes.*† E-Mycin (erythromycin enteric-coated tablets, Upjohn) is administered and well absorbed as the active base, may be taken immediately after meals or between meals, and is essentially nontoxic.

†Although penicillin remains the drug of choice against these organisms, erythromycin is an effective alternative

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wide-ranging usefulness in pneumonia*

*Mild to moderately severe, due to susceptible organisms

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Wide-ranging usefulness in pneumonia*

E-Mycin® 250 mg

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- For mild to moderately severe infections due to susceptible organisms that commonly invade the respiratory tract
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Alpha-hemolytic streptococci (viridans group): Short-term prophylaxis against bacterial endocarditis prior to dental or other operative procedures in patients with a history of rheumatic fever or congenital heart disease who are hypersensitive to penicillin. (Erythromycin is not suitable prior to genitourinary surgery where the organisms likely to lead to bacteremia are gram-negative bacilli or the enterococcus group of streptococci.)
Staphylococcus aureus: Acute infections of skin and soft tissue of mild to moderate severity. Resistance may develop during treatment.
Diplococcus pneumoniae: Upper respiratory tract infections (eg, otitis media, pharyngitis) and lower respiratory tract infections (eg, pneumonia) of mild to moderate degree.
Mycoplasma pneumoniae (Eaton agent, PPLO): In the treatment of primary atypical pneumonia, when due to this organism.
Treponema pallidum: Infections due to this organism.
Corynebacterium diphtheriae and *Corynebacterium minutissimum:* As an adjunct to antitoxin, to prevent establishment of carriers, and to eradicate the organism in carriers. In the treatment of erythrasma.
Entamoeba histolytica: In the treatment of intestinal amebiasis only. Extraenteric amebiasis requires treatment with other agents.
Listeria monocytogenes: Infections due to this organism.

Contraindication: Contraindicated in patients with known hypersensitivity to erythromycin.

Warning: Safety for use in pregnancy has not been established.

Precautions: Erythromycin is principally excreted by the liver. Caution should be exercised in administering the antibiotic to patients with impaired hepatic function. Surgical procedures should be performed when indicated.

Adverse reactions: The most frequent side effects of erythromycin preparations are gastrointestinal, such as abdominal cramping and discomfort, and are dose-related. Nausea, vomiting, and diarrhea occur infrequently with usual oral doses. During prolonged or repeated therapy, there is a possibility of overgrowth of nonsusceptible bacteria or fungi. If such infections occur, the drug should be discontinued and appropriate therapy instituted. Mild allergic reactions such as urticaria and other skin rashes have occurred. Serious allergic reactions, including anaphylaxis, have been reported.

Treatment of overdosage: The drug is virtually nontoxic, though some individuals may exhibit gastric intolerance to even therapeutic amounts. Allergic reactions associated with acute overdosage should be handled in the usual manner—that is, by the administration of adrenalin, corticosteroids, and antihistamines as indicated and the prompt elimination of unabsorbed drug, in addition to all needed supportive measures.

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*Mild to moderately severe, due to susceptible organisms.

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Use of fiberoptic colonoscope to reduce volvulus of colon

K. L. Jorns, MD; W. S. Lorimer, Jr., MD; H. V. Birdwell, Jr., MD

As the use of the fiberoptic colonoscope becomes more widespread, applications expand to include situations heretofore regarded as being treatable only by open operative procedures. We treated a case of a massively dilated sigmoid colon volvulus with the fibroptic flexible colonoscope, and thereby delayed definitive surgery in a poor-risk patient until he could be prepared for surgery. Review of the literature reveals only one previously reported similar case treated in this manner.[1]

Case Report

A 74-year-old black man was hospitalized on March 18, 1976, because of a distended abdomen associated with diffuse, colicky, abdominal pain and constipation without nausea, vomiting, or fever. He did not know when he last had a bowel movement. This patient also had Parkinson's disease with a pronounced tremor. He was taking Parsidol, Cogentin, Larodopa, Ethaquin, and Norflex. A physical examination on admission revealed an enormously distended abdomen with hyperactive bowel sounds and tenderness across the left and middle portions of the abdomen. The rectum was empty. Roentgenograms showed a large but distended sigmoid colon extending across the abdomen and upward to the level of the xiphoid process. Barium enema confirmed the presence of volvulus of the sigmoid colon. There was no clinical evidence of bowel strangulation nor infarction.

We tried to reduce the sigmoid volvulus with the proctosigmoidoscope, and the attempt was only partially successful. On the following day, distention had recurred and a flexible fiberoptic colonoscope was passed rectally to the site of the volvulus. By insufflating small amounts of air, we were able to distend the bowel lumen gradually at the site of its constriction at the twist, and to introduce the colonoscope into the markedly dilated sigmoid loop. Large amounts of liquid stool and gas were aspirated, eliminating the distention and at the same time allowing visualization of the bowel mucosa to determine that the bowel wall was viable. The medium-bundle Olympus fiberoptic colonoscope was the instrument used, and it was passed upward through the sigmoid loop, examining the bowel wall and aspirating the liquid stool and air; on downward to the point of the twist, crossing over itself; and into the proximal end of the sigmoid colon where a large amount of formed stool was encountered. At this point, a hook was created in the distal end of the fiberoptic colonoscope to stabilize its tip. The instrument was then twisted clockwise and withdrawn slowly, maintaining the crook in the distal end. As the sigmoid loop straightened out, the crook in the instrument tip was released, and the scope was slowly removed, utilizing the suction channel to totally decompress the volvulus. An x-ray flat plate of the abdomen was taken when the colonoscope was introduced to its greatest depth. Immediately after removal of the colonoscope, another flat plate was taken to confirm complete disappearance of the dilated sigmoid loop. The patient was returned to the recovery room and a Levine nasogastric tube was inserted and intravenous therapy continued to build up his markedly depleted store of electrolytes and nutritional needs. Six days later the volvulus began to recur, and on the seventh day he underwent colon resection.

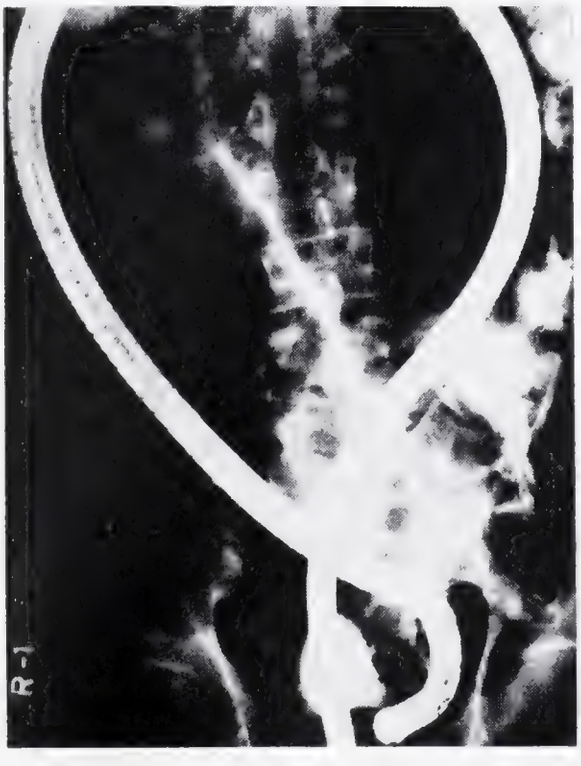
Discussion

The use of rigid sigmoidoscope to decompress a sigmoid volvulus is a well-estab-

1. Kidneys-ureters-bladder film showing volvulus distention.

2. Kidneys-ureters-bladder film showing site of twist.

3. The colonoscope is passed through the complete volvulus loop.



4. Complete decompression of volvulus after rotating.

lished procedure. If, however, the rigid sigmoidoscope cannot reach the volvulus, the flexible fiberoptic scope may be used instead. The colonoscopist must be especially careful during this procedure to prevent bowel perforation because of the distended, edematous, and friable condition of the sigmoid loop. If the physical examination or laboratory evidence indicates that the volvulus loop is strangulated or devitalized the fiberoptic procedure should not be started, but rather a laparotomy should be performed immediately. Sigmoid volvulus occurs mostly in elderly persons, and an emergency resection is accompanied by a high mortality. If the appearance of the mucosa shows normal vascularity, the procedure can be pursued to complete decompression and reduction of the twisted loop. If, however, the sigmoid loop in the volvulus is dusky or dark purple, or if bloody drainage is present, the procedure should be terminated and operative intervention begun.

Conclusion

The use of the flexible fiberoptic colonoscope to reduce and decompress a distended sigmoid colon volvulus in a poor-risk elderly patient has been presented. A similar case was reported by Ghazi, Shinya, and Wolfe.[1] When surgery is required for repeated episodes of sigmoid colon volvulus, colonoscopy decompression offers a means of buying time to prepare the bowel and correct the patient's systemic disturbances and electrolyte imbalances.

References

1. Ghazi A, Shinya H, Wolfe WI: Treatment of volvulus of the colon by colonoscopy. Ann Surg 183:263-265, 1976.

Dr. Jorns, 424 South Summit, Fort Worth, TX 76104.

Dr. Lorimer, 1400 South Main St, Fort Worth, TX 76104.

Dr. Birdwell, Medical & Surgical Clinic Association, 1200 Summit, Suite 120, Fort Worth, TX 76102.

Coxsackievirus B infections in adults

A. W. McCracken, MD; G. J. Race, MD

A wide range of clinical signs and symptoms, referable mainly to the heart and the nervous and respiratory systems, was observed in 69 adults with confirmed coxsackievirus B infections. All but two patients, who had persistent cardiac abnormalities, were thought to have recovered completely. The only fatal case occurred in a group of 165 patients in whom the diagnosis of coxsackievirus B infection was suspected but unconfirmed. Despite the benign outcome of nearly all the infections described here, the role of this common group of viruses in chronic heart disease, diabetes mellitus, and other diseases remains an important subject for future investigation.

Viruses belonging to the Coxsackie B group have been associated with human disease since shortly after their initial isolation in 1949.[1] It was quickly recognized that these agents were capable of causing serious disease in neonates and children but it was some years before their significance in causing severe adult infections was realized.[2] Much of the investigative work on coxsackievirus disease has centered on outbreaks which have almost always occurred in children. Recently however, more attention has been given to adult infections, particularly those in which the heart has been involved, although it is evident that many other organs may have been affected to varying degrees.[3-6]

During 1968-1974, 234 cases of coxsackievirus B infection were tentatively diagnosed in patients 14 years and older admitted to Baylor University Medical Center. Diagnoses were based on virus isolation or serology, or both, performed in the Sammons Virology Laboratory. From these 234 cases, 69 fulfilled definitive criteria for coxsackievirus B infection (Fig 1). Data obtained during the hospital stay of these 69 patients were examined to determine the main clinical and laboratory findings associated with proven coxsackievirus B infection.

From The Departments of Clinical Microbiology and Pathology, Baylor University Medical Center, Dallas.

Virological Methods

Specimens of stool, body fluids, throat washings, and tissues usually were processed in the virology laboratory within an hour of sampling. Serum samples were obtained at the same time and further serum samples were requested to be taken 14 to 21 days later. Most of the 165 patients who had "unconfirmed" coxsackievirus infections were excluded because the second serum sample was not obtained. Virus isolation was achieved by inoculation of primary Rhesus monkey kidney cells. Coxsackievirus isolates were identified by the use of combination pools of enterovirus antisera.[7] Neutralizing antibodies against coxsackieviruses B1 to B5 were assayed in the patients' sera by standard techniques.[8]

Results

The age range of the 69 patients was 14 to 72 years (mean 31); 39 were males, 30 females. The presenting signs and symptoms and clinical diagnoses are shown in

1. Criteria for diagnosis of coxsackievirus B infection in 69 cases.

1. Four-fold or greater rise in titer of neutralizing antibodies to Coxsackie B viruses with or without isolation of the virus	59
2. Isolation of Coxsackie B viruses with neutralizing titer of 1/40 or greater (single serum only tested)	7
3. Isolation of Coxsackie B viruses from cerebrospinal fluid	3
Total	69

Figs 2 and 3. Seven patients had underlying or concurrent diseases, two of which were viral infections (infectious mononucleosis and viral hepatitis). One patient was diabetic, one had systemic lupus erythematosus, one had cirrhosis, and one had been treated for a cerebral glioma.

The laboratory findings are summarized in Fig 4. With the exception of the diabetic patient, none had elevation of blood glucose levels or glycosuria and all had normal results of urinalysis. The patient with concurrent mononucleosis (Fig 3) had a positive heterophile test, a transient false positive VDRL test, and a typical mononuclear blood smear. Both patients with concomitant hepatitis A or B (Fig 3) had elevations of SGOT and lactic dehydrogenase (LDH) in excess of 2,000 and 1,300 mU/ml, respectively. Procedures for the detection of hepatitis B antigen were not available at the time. The results of chest x-rays are shown in Fig 5. The ECG findings in 19 patients who had cardiac or cardiorespiratory illnesses are summarized in Fig 6. In the remaining 50 patients, normal ECG patterns were found in 29 and evidence of old myocardial infarction in 2. In 19 patients, ECG examination was not performed. The sources of the viral isolates and the serotypes of the coxsackievirus infections are shown in Figs 7 and 8. No infections by coxsackievirus B6 were detected. Follow-up data were incomplete. No deaths occurred in the 69 patients, but one death, with autopsy findings of viral myocarditis, occurred in the remaining 165 patients who had "unconfirmed" coxsackievirus B infection. Two patients had persistent cardiac abnormalities on discharge. Both had a degree of cardiomegaly, and one had premature ventricular contractions. All other patients were considered to be quite well and recovering satisfactorily at the time of discharge, but no later information was available. No immediate sequelae were noted in the 18 patients with nervous system infection.

Eleven patients received antibiotic therapy on an empirical basis. None of the patients with cardiac involvement received steroids.

2. Presenting signs and symptoms in 69 patients with coxsackievirus B infections.

Signs and Symptoms	No. Patients	Remarks
Fever	69	Range 37.8-40.6C, (100-105 F) mean 38.9C Duration 3-35 days (mean 8)
Headache	40	
Cough	16	1 patient had hemoptysis
Myalgia	21	
Chest pain	15	
Rash	12	Maculopapular, trunk, face, limbs
Pharyngitis	10	
Neck stiffness	9	
Photophobia	7	
Pericardial rub	7	
Dyspnea	6	
Cervical adenopathy	5	
Rhinitis	4	
Central abdominal pain	3	
Conjunctivitis	2	
Hepatomegaly	2	
Otitis	2	
Splenomegaly	2	

Discussion

Coxsackieviruses are small RNA viruses, which, along with polioviruses, echoviruses, and a few recently classified agents comprise the enteroviruses of man. Coxsackieviruses of groups A and B are less similar to each other than their names imply. They are distinguished by their different pathological effects on newborn mice. All six types of coxsackievirus B grow readily in a variety of cultured cells,

whereas only a few of the 24 coxsackievirus A group are cultivable in cell culture on primary isolation. At present it seems likely that of the more than 60 types of enteroviruses which may affect man, the coxsackievirus B types 1 to 5 are the most important causes of serious illness. A wide range of clinical manifestations has been recognized (Fig 9), and many of these were exemplified in the 69 patients described.

The pathogenesis of coxsackievirus infections in man can be summarized as shown in Fig 10. Approximately 75% of infected persons are asymptomatic.[9] The pathological changes which occur in a number of organs in the infected mouse show a remarkable similarity to those found in human coxsackievirus infection. This has provided an excellent animal model to study infections by these viruses. The severe combined effects of exercise and coxsackievirus infection on the myocardium of the mouse[10] is one important application of this animal model that may apply to human infection and the effect of postinfection physical exertion. The cardiac effects of coxsackievirus B infections in adults have been well documented.

3. Clinical diagnosis in 69 patients with coxsackievirus B infection.

Diagnosis	No. Patients	Diagnosis	No. Patients
Cardiovascular:		Alimentary:	
Viral, idiopathic, or nonspecific pericarditis	7	Gastroenteritis	2
Viral myocarditis	8	Hepatitis	3*
Allergic vasculitis	1	Mesenteric adenitis	1
Respiratory:		Other:	
Pleurodynia	6	Fever, unknown origin	9
Influenza	2	Infectious mononucleosis	1
Viral pneumonia	5	Total	69
Viral bronchitis	2		
Combined cardiorespiratory infection	4		
Central Nervous System:			
Viral encephalitis	5		
Viral meningitis	6		
Aseptic meningitis	4		
Neurotropic viral infection	2		
Muscle weakness	1		

*Two patients had had the clinical and laboratory features of viral hepatitis A or B.

4. Laboratory findings in patients with coxsackievirus B infections.

Procedure	No. Abnormal	Remarks
Erythrocyte sedimentation rate	38/60	Range 15-110 mm/hour
White blood cell count	1. 20/69	Elevated WBC with polymorph leukocytosis
	2. 8/69	Normal WBC with relative lymphocytosis
Cerebrospinal fluid cell count	16/18	Range 70-1,300 lymphocytes/cu mm
Protein	1/18	
Serum enzymes (GOT, LDH, AP)*	28/69	Maximum GOT elevation, 330 mU/ml†
		Maximum LDH elevation, 550 mU/ml†
		Maximum AP elevation, 100 mU/ml†

*GOT: glutamic oxalacetic transaminase; LDH: lactic dehydrogenase; AP: alkaline phosphatase.

†Excludes two patients with concurrent hepatitis A or B.

Abnormality	No. Patients
Pneumonia	8
Cardiomegaly	8
Pulmonary congestion	3
Pneumonia + pleural effusion	2
Atalectasis	2
Pneumonia + cardiomegaly	1
Normal	45
Total	69

5. Chest x-ray findings in 69 patients.

6. Electrocardiograph patterns in 19 patients with coxsackievirus B infection and clinical findings suggesting cardiac involvement.

ECG Changes	No. Patients
ST and T wave	8
ST and T wave with ectopic beats	2
ST and T wave with atrial flutter	1
Nonspecific T wave	3
Normal ECG	5
Total	19

Not only is there evidence of direct viral invasion of the myocardial cells[11] and the pericardium, but also of involvement of the endocardium.[12] It is not unlikely that pancarditis with predominance of myocarditis or pericarditis, or both, occurs in coxsackievirus B infection and that this may resemble more closely than has been previously realized the pancarditis of rheumatic fever, both clinically and pathologically.[13] Again, the clear-cut distinction that is usually made between adult patients with acute febrile myopericarditis and myocardial infarction may not always be valid. Of 233 patients with transmural infarction described by Woods and associates,[14] 9% had good evidence of associated active coxsackievirus B infection. Although the follow-up studies in our group of patients were incomplete, it appears from other descriptions of adults with viral myopericarditis that the majority of adults recover completely from the carditis but that some do not. A few die in the acute stages of the illness or shortly thereafter,[3,11] and some have residual cardiac abnormalities which include arrythmias, conduction defects, and cardiomegaly. Coxsackieviruses should therefore be considered as one of the important causes of adult myocardiopathy.[13]

7. Sources and serotypes of coxsackievirus B isolates from 81 specimens from 69 patients.

Source	Virus Serotype B1	B2	B3	B4	B5	Total Positive Cultures	Total Negative Cultures
Feces	1	4	5	2	2	14	27
Spinal fluid	-	-	-	1	2	3	18
Throat swab	-	-	1	1	-	2	15
Pericardial fluid	-	-	-	1	-	1	1
	1	4	6	5	4	20	61

Involvement of the pancreas, which is a typical finding in the infant mouse model,[15] is also found in human adults with coxsackievirus B infection. It may only be manifested as a dull, aching pain in the central abdominal area, which was present in three of the patients described here, or in some instances as fulminating, acute pancreatitis with characteristic elevations of serum and urinary amylase levels.[16] Involvement of the endocrine component of the pancreas by coxsackievirus B infection has been postulated on epidemiological grounds as having a relationship to diabetes mellitus of juvenile onset.[17] There was no obvious evidence of disturbance of glucose metabolism in 68 of the 69 patients in our study. A recent careful follow-up five years after a coxsackievirus B4 epidemic in a closed island community failed to show any alteration in the prevalence of diabetes mellitus in the population.[18] Further investigations are required to determine the effects of these viruses on the exocrine and endocrine portions of the pancreas. Moderate elevations of serum GOT and LDH levels are common in coxsackievirus B infections, and these elevations appear to be of relatively short duration. Of the 28 patients who had abnormal elevations of serum enzymes (Fig 4), all had improved or normal enzyme patterns before discharge from the hospital. Smith[3] found that 6 of 42 patients with myopericarditis had elevated enzymes, all of which rapidly returned to normal. Four of the 14 patients in our series who had ECG abnormalities had raised serum enzyme levels. Whether the heart or the liver is the main source of elevated serum enzymes in any particular case may be difficult to determine even with isoenzyme estimations.

Coxsackievirus B infection of the central nervous system may occur as an isolated clinical syndrome or in combination with manifestations in other systems. The most typical illness is aseptic meningitis, which is accompanied by cerebrospinal fluid lymphocytosis and which runs a benign course. Rarely, encephalomyelitis may develop.[3] True muscular paralysis is rare although myalgia and transient symptomatic muscle weakness are common.

In view of their diverse clinical manifestations, coxsackievirus B infections can only be differentiated with certainty from a wide variety of other infections and inflammatory processes by identification of the causative agent in a diagnostic laboratory. For clinical purposes, viral isolation is the method of choice: stools or rectal swabs are the most productive of positive isolates, while pleural and pericardial fluid

8. Distribution of coxsackievirus B serotypes in 69 infected patients.

Coxsackievirus Serotypes	No. Diagnosed by Viral Isolation + Serology	No. Diagnosed by Serology Alone	Total No. Patients
B1	1	5	6
B2	4	12	16
B3	6	12	18
B4	5	12	17
B5	4	8	12
B6	0	0	0
		Total	69

or biopsy material are occasionally valuable. Isolation of virus from cerebrospinal fluid, although diagnostic, is infrequently achieved.[19] Serologic diagnosis is of much less immediate clinical value than culture, and should be regarded only as a measure complementary to viral isolation.

Treatment is of necessity supportive or symptomatic. Antibiotics are clearly of no value in the absence of secondary bacterial infection, and an early rapid viral diagnosis may help to preclude the use of unnecessary antimicrobial agents. In severe cases of cardiac involvement, standard regimens for the control of failure, arrythmia, and pain are indicated. The use of steroids in coxsackievirus myocarditis is somewhat controversial,[3,6,20] but the balance of opinion at present seems to favor steroid therapy in severe cases.

The spectrum of clinical infection in adults by the coxsackievirus B group is wide and variable but includes a number of severe, sometimes life-threatening illnesses and a potential for causing chronic diseases of the heart and perhaps other organs. The significance of concurrent infections with other viruses, such as occurred in two patients with hepatitis and one with infectious mononucleosis (Fig 4) is poorly understood and, along with many unsolved questions about coxsackievirus B infections, will be hard to answer unless such cases are appropriately investigated from a viral standpoint.

9. Clinical manifestations associated with coxsackievirus B infection in adults.

Arthritis
Hemolytic-uremic syndrome
Hepatitis
Intercostal myalgia
Myopericarditis
Nephritis
Orchitis
Pancreatitis
Pleuropneumonitis
Skin rashes
Upper respiratory infection

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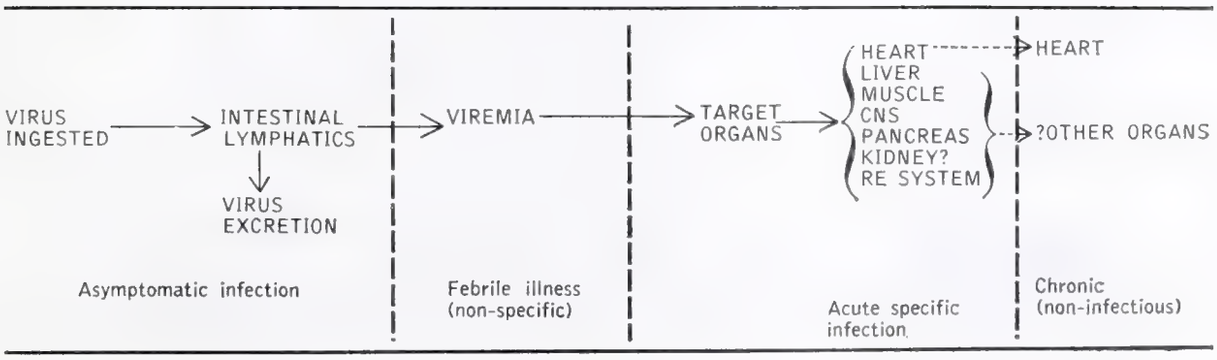
Dr. McCracken, Director of Clinical Microbiology, Baylor University Medical Center, and Professor and Chairman, Department of Pathology, Baylor College of Dentistry, Dallas, TX 75246.

Dr. Race, Pathologist in Chief, Baylor University Medical Center; Dean, Roberts Center for Continuing Education; Associate Dean for Continuing Education and Professor of Pathology, The University of Texas Southwestern Medical School, Dallas, TX 75235.

10. Pathogenesis of coxsackievirus B infections in man.



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The pediatric nurse practitioner as provider of well child care in a rural area of Texas

John W. Griffin, MD; Juanita Conkin, RN, PNP; Julie Lang, BA

The ability of the pediatric nurse practitioner to examine and evaluate patients has been well documented.[1,2,3] This report concerns the pediatric nurse practitioner as a provider of well child care in a rural area of Texas.

History

This child health service program (designated PEDIA) was funded by the Office of Early Childhood Development in the Texas Department of Community Affairs. The commissioners court of Navarro County designated the Navarro County Consultation Center (a mental health/mental retardation project) as administrator of this project.

The program began in September 1973, and this report represents the results of the first two years of a three-year funding.

Area Served

Navarro County, population 31,150, is a rural county in North Central Texas approximately 40 miles southeast of Dallas. Two-thirds of the population is in Corsicana, the county seat. The population is 74.3% white, 22.8% black, and 2.9% brown. As of 1970, 21.3% of the population was in poverty, including 65% of the blacks and 15% of the whites. The median family income in the county is $4,600 yearly, and 74% of the black families have an income of less than $4,000 annually. In addition, 18.5% of the people in Navarro County live in overcrowded housing.

The county has one hospital with a capacity of 154 beds, and is served by 32 physicians, or one physician per 973 persons. In 1971, there were 28.4 infant deaths per 1,000 live births, 21.8 neonatal deaths per 1,000 live births, and 8.7 fetal deaths per 1,000 live births in Navarro County.

Obstetrical Care

In 1970, a prenatal clinic for indigent pregnant women was begun at the Navarro County Memorial Hospital. It was initially funded by a local trust. After the local funds were exhausted, the hospital assumed the operation of the clinic. In September 1973, PEDIA began offering services to the prenatal clinic through a subcontract with the Navarro County Memorial Hospital. PEDIA provided the hospital with extra funds to help finance the obstetrical clinic for a period of three years. The clinic operates under the supervision of the obstetrics committee of the hospital. Pregnant women who are unable to pay for care

1. Navarro County Memorial Hospital deliveries.

	No. Service Patients	% Service Patients Having Prenatal Care	Private Deliveries	Total Deliveries
1970	91	37%	333	424
1971	103	60%	376	479
1972	97	48%	367	464
1973	137	82%	444	581
1974	113	90%	421	534
1975	145	85%	511	656

Years before 1973: 48% service patients had prenatal care
Years 1974 and 1975: 87% service patients had prenatal care

Pediatric nurse

are referred to the hospital by private physicians, the health department, Planned Parenthood, and PEDIA. Eligibility for care is determined by the hospital business office.

Fig 1 shows that before 1973, when the obstetrics clinic was instituted, 48% of the indigent obstetrical patients had prenatal care. Since then, 87% of the indigent patients have received prenatal care.

A registered nurse employed by the hospital is in charge of the prenatal clinic, which meets on Monday and Tuesday mornings. Routine tests are performed during each clinic visit. These include urinalysis, blood pressure, weight check, and fetal heart tones. If a woman has problems and needs immediate medical attention, she is seen by the physician on emergency room call at the hospital. Expectant mothers who are already enrolled in the prenatal clinic are seen on Mondays. Women who are making their initial visit are seen on Tuesdays.

The PEDIA program provides a pediatric nurse practitioner and a licensed vocational nurse to the prenatal clinic. These nurses show educational films, give group and individual counseling and demonstrations, and furnish pamphlets on how to care for the baby. They also discuss proper nutrition for the pregnant mother and her new baby and discuss individual questions or concerns of the mother-to-be. Fig 2 shows the number of patients served by the prenatal clinic.

The pregnant patients are delivered by members of the obstetrical staff of the Navarro County Memorial Hospital. The newborns are also attended by a member of the staff.

2. Prenatal clinic.

	Jan-Dec, 1974	Jan-Dec, 1975
New patients	142	108
Number of clinic visits	503	651
Average number of unduplicated patients per month	29	33

Well Baby/Well Child Care

Until this program began, no well child care had been available to the indigent citizens of Navarro County.

The PEDIA staff makes its initial contact with the mothers at the prenatal clinic. They also see these mothers in the hospital after delivery, at which time they make appointments for the well baby clinics.

The well baby/well child clinic is held daily. Four days a week the clinic operates at the PEDIA office in Corsicana. On Wednesdays, the nurses visit Frost, Dawson, or Kerens; each of these outlying communities is visited once a month, and these county clinics are held in Head Start centers.

Format of Clinics

Children are seen every two weeks until they are two months old, then every month until age 1 year, then every two months until age 2 years, and then every three months until age 6, or more often if necessary.

The licensed vocational nurse obtains a thorough history of each child, including pregnancy and birth, feeding and eating habits, allergies, infections and illnesses, development, behavior, immunizations, and family history. She also obtains the child's temperature, height, weight, head circumference, and blood pressure. Each child is given a Denver Developmental Screening Test. The pediatric nurse practitioner does a routine physical examination. If a child has an illness or possible abnormality such as a heart murmur or visual or hearing loss, he is referred to a physician for diagnosis and treatment. Fig 3 shows that during 1974, 75 patients were referred for medical evaluation and during 1975, 71 were referred for that reason. A three-part PEDIA referral sheet is sent to the physician with the nurse's explanation of her findings and reason for referral. The physician writes his findings and reason

for referral. The physician writes his findings and suggestions or treatment, or both, on the form and sends it back to PEDIA for follow-up. If a family does not have Medicaid or is unable to pay for the physician's visit, PEDIA pays for the first visit and diagnostic work-up, unless care is available through one of the health department programs.

Parents receive individual counseling after the child is examined. This includes discussion of the child's growth and development. Suggestions are made for treatment of any problem or developmental lag. Diet counseling is emphasized and covers which foods are allowed and when to start them; and how much to give the child. Information is provided on general health care and routine well child care. If they call or come in, mothers may also receive individual counseling regarding specific problems.

The child health and parent education services began in February 1974. Fig 3 summarizes the services rendered. Records reveal that the examining team averaged 246 patient contacts per month in 1974 and 204 patient contacts per month in 1975.

Inoculation programs are provided through the city and county health department facilities.

All pediatric deaths recorded in the Navarro County Memorial Hospital death register and on death certificates filed at the Navarro County Courthouse in Corsicana have been reviewed for 1973, 1974, and 1975. No deaths were found which could be attributed to improper evaluation by members of the staff.

Summary

A review of two years' well child care provided by a pediatric nurse practitioner in a rural Central Texas county is presented. This study demonstrates the effectiveness of this method of providing well child care when adequate medical consultation is available. The program has been well received by the families served and by the local medical community.

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Dr. Griffin, Clinical Assistant in Pediatrics and the Department of Environmental and Community Health, University of Texas Southwestern Medical School, Dallas, Texas.

Mailing address: Medical Arts Clinic Assn., P.O. Box 841, Corsicana, TX 75110.

Ms. Conkin, Ms. Lang, c/o PEDIA, P.O. Box 1735, Corsicana, TX 75110.

3. Child health, parent education.

	Jan-Dec, 1974	Jan-Dec, 1975
CHILD HEALTH		
New patients	299	244
Number of clinic visits	983	1,257
Average number of unduplicated patients per month	118	90
Number of patients referred for medical consultation	75	71
PARENT EDUCATION		
New patients	147	66
Number of clinic visits	843	1,151
Average number of unduplicated patients per month	99	81

English nurse–American nurse: whose feet are on the ground?

Edith L. Hollan, RN

One week in England does not make an expert on English nursing education. However, when that week is largely spent touring hospitals and talking to nurse educators, public health officials, and nurses in various stages of education and experience, it serves to crystallize disquieting thoughts which have been fermenting for some time. As the diploma schools of nursing in the United States fold up, one by one; as the practical nurse schools (LVN, LPN, and others) flourish, turning out products of uneven quality; as the baccalaureate schools flounder among their jealous hierarchies and pretentious definitions of a nurse, the thoughtful registered nurse cannot help but wonder what becomes of the patient amid the chaos.

England's problems with its health care system are manifold; that much is obvious from the first newspaper one picks up or the first flip of the television dial. Barbara Castle takes to the airwaves almost daily in sharp-tongued defense of her National Health Service. That department last year numbered among its headaches a strike of many of the junior doctors in London's hospitals, strikes by registered nurses, and closing of entire wings of hospitals because of shortages of money, personnel, and equipment. People speak of waiting for months to have an essential—but non-emergency— operation; but when people speak of nurses and ward sisters (head nurses) speak of student nurses, the story is different. Then, words like "efficient," "capable," and "well-trained" creep into the conversation.

By contrast, some of the comments I have heard in recent years about American nurses came to mind. From a surgery patient about an RN, recent graduate of a University baccalaureate program: "Oh, please don't let her come near me again!" From a brilliant RN who had taught in three of the country's most prominent university schools of nursing: "The situation's frightening. That's why I got out of nursing education." From another RN who, like me, recently dropped out of a doctoral program in nursing from sheer lack of desire to be part of today's educational scene: "My God! If I'm ever hospitalized, I hope I have diploma-school nurses taking care of me!" From a university graduate nurse of some years ago, who has been hospitalized frequently: "The only really good nurse I've had was from Australia."

What is causing all this apprehension? Nursing, they tell you in the university systems, is trying to find its identity in a new world of health care delivery. It would take a greater sage than I to foresee what identity they'll finally settle on, but I can trace a few current explorations in which the American patient is the loser.

They say (in this article, "they" refers to prominent university nursing faculties) that nurses in the future will be concerned with the "client's" entire life and not just his hospital experience. With this in mind, the student is crammed with courses in psychology, psychiatry, and transactional analysis. She is assigned a family in the community to follow for a year or more, acting as analyst, advisor, and mother confessor. One day a week she is sent to the hospital wards not to take physical care of patients, but to interview one single patient. Her entire being is focused on the psychological problems of the whole patient. She develops either a fine disdain for the diploma school nurses who do day by day patient care, or she becomes frustrated at her own lack of clinical skills. She may be disappointed in her training, but if she complains through channels in her nursing school, she is told, "If you feel

that way, you are in the wrong program. Perhaps you should be *merely* a diploma nurse." In one case, the complaining student was given an appointment with a psychiatrist!

I have some reservations about the original premise that the nurse of the future will be a daily ingredient of everyone's life, with the hospital experience being only a small portion of nursing. Granted that health delivery systems are changing and that prevention of illness is an important goal of any medicine-related group, human nature doesn't change. It is hard to visualize the ordinary layperson calling on a nurse for daily help and advice. Americans generally are independent souls; for better or worse, they try to solve their own problems. Most of them even skip the annual physical check-up which their doctors have been recommending for years, and now some reports indicate that perhaps the annual check-up is not, indeed, the final answer, and that it may even promote a sense of false security. Although the client of the future might call a nursing-advisory service to ask how best to treat a cut on Johnny's head, I doubt that he or she will sit still for frequent, searching, personal interviews by the friendly neighborhood nurse. Already, welfare rights organizations are rebelling against similar interviews by social workers. I predict that for many years, laypeople will continue to associate "nurse" with "illness" and "hospital," and today most active nurses *are* in hospitals.

The interview system is striking snags already. Any honest student will admit that many of these hours of interview are faked. A student is assigned four hours with one postoperative patient in one morning. She is often literally incapable of performing nursing procedures on that patient; indeed, she is taught to complain if the staff nurses delegate any physical care to her. Therefore, she must interview. What type of relationship does the patient have with his wife, his children, his employer? What deep psychological problems does he have that he doesn't even recognize? And on and on. If I were recovering from surgry and a student nurse tried to analyze my life for four hours, I'd scream for help! Instead, what happens most frequently is that patient and student come to an unspoken agreement that enough is enough; after 30 minutes or so, the student goes to the library and finds enough material to convince the instructor that she was interviewing for four hours. In other cases, when students conduct scrupulous interviews, patients complain later that the amateur interview left them exhausted and seriously worried about problems they never knew they had! Aren't we perhaps underrating the ordinary human? He's generally tough and hardy and has satisfactorily coped with or compensated for many problems, then forgotten them. Must we dredge them up in order to manufacture a field of nursing?

Another axiom dear to the hearts of American nurse educators is that basic nursing skills are easy to pick up in a day or two. "We will teach her holism, and she can learn how to handle a volume respirator quickly after she's employed as an RN." True, the simpler nursing procedures do not take long to learn, and it doesn't really help a patient to irrigate his nasogastric tube without noticing that he's scared to death of tomorrow's surgery. Nevertheless, it is questionable that thoughtful nurses *ever* were quite so crass; certainly our training for many years has emphasized consideration of the whole patient as well as manual skills. But I'm thinking of the education and self-as-

surance that come only from experience. Days, hours, weeks of seeing and dealing with the varied situations that arise on a hospital ward, in a clinic, or during a home visit still count. Even the small manual dexterities such as skill in starting an intravenous infusion affect the nurse's self-assurance *and communicate themselves to the patient.*

The woman who pled, "Oh, please don't let her come near me again!" was the victim of an RN who had never drawn blood for a laboratory test. Brash she was; trained she was not. She hacked away at the patient's arm with a cheery, "Guess I have to learn some time, don't I?" I bit back the obvious answer, "Yes, but why not a year or two ago—on your roommate?" Why spill into working hospitals a flood of newly-registered nurses who must be trained in the manual skills by already overworked staff? Morale is hurt on both sides when the experienced LVN or LPN watches the new RN bumble a procedure that she herself dashes off with expertise. The new RN may console herself that she is better educated in the humanities, but she has lost ground that is difficult to regain.

Still another sacred cow for today's baccalaureate student is the necessity to force the patient to verbalize his problems and fears. The word "force" is never used, of course; we don't even "encourage" any more. We "give positive reinforcement." But heaven help the student who has interviewed a patient and has not positively reinforced him into verbalizing at least half a dozen anxieties! Again, the patient is loser more often than winner. There are times when a person wants to talk, and it is important not to cut him off. But many times—illness often being one of them—he just wants to be left in peace and quiet! Receptive empathy from the nurse will work wonders, and trained listening is invaluable, but I submit that true empathy and therapeutic kindness cannot entirely be taught. I have heard vicious, ego-shattering remarks made to patients by nurses who were trained long ago, and equally vicious ones by the latest graduates of the finest schools, and even a few from their PhD instructors. Likewise, some of the quickest empathy and most sensitive tact has come from the least trained aides on the staff.

Another problem is too-early specialization for the student nurse, to the point where she can and does finish training without ever being inside an operating room or watching a delivery. I believe both the student and the community are victimized by this practice. The student deserves a taste of all nursing departments so that she may more intelligently select her specialty, and the small hospital or community deserves nurses who can function reasonably well wherever they are needed. The explosion of knowledge in the field of medicine fairly well justifies doctors' specialization, but I think it is pretentious to assume that the same applies to nursing.

In this country, super-specialization carries over into the graduate courses, but there a reverse technique enters: Besides specializing, the master's or doctoral student in nursing is swamped with so many hours of required credits that she feels as if she were a freshman again. No longer is it assumed that a student who has qualified for doctoral work is capable of worthwhile independent study; indeed, most credit hours are spoon-fed and nearly always include pet projects of the current faculty. Many graduate nursing students drop out of the programs not because of scholastic difficulties, but because they

are bored. They assess the whole muddled field of nursing education and say, "Who needs it? Or wants to be part of it?" If this drift continues, I fear it will deprive the educational field of too many enthusiastic, innovative teachers and leave us with pure theoreticians teaching future pure theoreticians. Carrying the thought to its ultimate conclusion, we may imagine the patient of the future choking to death because his nurse is giving him very skillful positive reinforcement but cannot suction his tracheostomy tube!

The English nurse, who is much in demand in this country, cannot take full credit for the fact that her feet are more firmly on the ground than ours. English student nurses are paid employees of the government and must, by statute, do clinical work 40 hours a week except for designated study blocks. The National Health Service thus forces the student into a position where she absorbs experience and matures in her judgment concurrently with her studies. We did that once, and abandoned it. The universities of Manchester, Edinburgh, and Hull offer baccalaureate programs, but with the NHS work requirement intact. Doctorates are available, too, but through a process refreshingly different from ours: The candidate selects her dissertational subject with care, then must satisfy a faculty committee that it is of a scope and nature worthy of doctoral study. From that time on, she is on her own; if she wins her PhD, it is entirely a product of creative independent study. The overall result seems to be better-rounded, more self-assured nurses at all levels.

In England too, however, the educators are making comments such as: "We mustn't take on too much of the doctor's work just because it's boring for him!" and "Education has too often been sacrificed to service." Both statements are true to some extent, but also self-limiting. Are we trying to upgrade ourselves straight out of a good nursing education? Have we bitten off too much in the attempt to provide a full liberal arts education *and* nurse training in four years' time? Yale University School of Nursing may think so; it has just reintroduced its nurse-training of college graduates, which it became famous for and abandoned some years ago.

Florence Nightingale bears the onus on both sides of the Atlantic for much of the modern educators' thinking. She was adamant that nursing education should be independent of the proprietary hospital institution, and she also said, "Don't let the doctor become head nurse." We may be forgetting, however, that she did most of her writing in another century, and that the sweatshop and workhouse conditions she so valiantly fought are—partly because of her efforts—things of the past. I would even submit the revolutionary idea that the proprietary hospital may not be all bad. Student nurses may do the hospital's work at cheap wages, but they receive something in return: a wealth of experience. Florence Nightingale also said, "I do not pretend to teach her, I ask her to teach herself and for that reason I venture to give her a few hints." I suggest that today's dedicated student might prosper with a bit more of this self-teaching, and that she could do it in many different clinical settings.

Both England and the United States recently have made broad studies of nurse education,* and in neither country have the findings been implemented to any great extent. One intriguing feature common to

* In England it was the Briggs Commission Report of 1972, and in the United States it was incorporated into reports of the Secretary of HEW to the Congress in 1964 and 1974.

both was the suggestion that nursing education could be a progression of steps wherein the student could stop at certain levels and become employed without relinquishing her opportunity for upward mobility. She could return and study at any time to satisfy requirements for the next level, which would prepare her for jobs with successively higher pay and greater responsibility. The thought might bear looking into before we follow our current tangent too far.

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*Webster's New Collegiate Dictionary

Dallas physician paints to push the worries away

A one-man show is "an experience akin to undressing in public," says Howard C. Coggeshall, MD, a Dallas rheumatologist, who has presented three solo shows benefitting the Arthritis Foundation. The doctor continues activities in his favorite avocation—painting.

Dr Coggeshall has devoted more than 40 years of study and energy to art. He won first place in the oil division of the 1976 TMA Physicians' and Spouses' Art Exhibit for his painting, "Squash." In the same show he won second place in the watercolor division for "Snow Scene—New Mexico."

Howard C. Coggeshall, MD

Dr Coggeshall has been a regular exhibitor with the American Physicians' Art Association (APAA) since 1960. He has received more than 20 APAA awards, including three best-of-show honors. One APAA winner, "Arizona Cactus," an oil painting, was selected for use on the cover of the *Journal of the American Medical Association* (April 1966) and was reproduced on 10,000 Christmas cards benefitting the Arthritis Foundation, North Texas Chapter.

Dr Coggeshall's exhibits are not confined to the medical world. In 1964, his oil painting, "Castor Bean" won the Museum League Award in the Dallas County Annual Museum of Fine Arts Exhibition. In 1961, 1964 and 1965, he won awards from the Texas Fine Arts Association. At the invitation of the Manpower Company, Dr Coggeshall exhibited two paintings in the 1964 Manpower European Tour. "Squash" won a gold medal as the best painting from the United States during the 1965 International Artists' Festival in Turin, Italy. "Two months later I found that I had missed out on a big thrill. The American Consul had represented me in receiving the gold medal and later helped me retrieve the painting which still hangs in my office," Dr Coggeshall said.

The physician-artist's early life in the small Indiana farm community, Saratoga, was almost devoid of art. "My interest in painting did not develop until I was an intern (in 1932) at the Boston City Hospital," he said. A combination of scant funds, homesickness, and boredom led him to invest in a dime-store paint set. The paint set, a friend who also was a watercolor artist, and the nearness of the Boston Art Museum inspired Dr Coggeshall to undertake "a self-taught education in fine arts."

He spent most of the next nine years in Boston at the Massachusetts General Hospital. He participated in workshops and evening classes for painting, woodcuts and

etchings at the hospital. This led to an invitation to join the Boston Physicians' Art Club, which exhibited in the local galleries.

The group was asked to participate in the organization of the American Physicians' Art Association, which planned to have an annual exhibit at the time of the American Medical Association convention. Dr Coggeshall won first prize for watercolors in APAA shows in San Francisco and St. Louis. He considers the award winning painting, "Winter Solitude," oriental in style, his best. At the time, the painting represented an "emotional high," the doctor said.

In 1941, Dr Coggeshall joined the military service, and in 1944 was awarded first prize in a Hot Springs, Ark, Army show. Participation in the American Physicians' Art Association is the most important stimulant to furthering an interest in painting, Dr Coggeshall said, because it provides an opportunity to exhibit paintings in shows judged by professional artists. "Even though you may like what you do, your work needs the evaluation by the critical eye of an impartial artist. As your painting experience becomes more sophisticated, you will, in time, not be discouraged when a favorite picture is rejected or fails to get a prize. You will appreciate that art is an emotional experience with many expressions. A painting turned down in one show may be a prize winner in the next. One soon learns to stand apart from all of the hangups of the professional artists and to paint for the fun of it," he said.

Dr Coggeshall donates paintings for annual fund-raising affairs in Dallas County. Offices displaying his paintings include the Dallas County Medical Society, The University of Texas Southwestern Medical School Student Union Building, Presbyterian Hospital of Dallas, Baylor University Medical Center, the Grand Prairie Woman's

Winter Solitude

Club, and Goodwill Industries.

Dr Coggeshall does not leave his hobby at home. A Hawaiian scene, the by-product of a vacation, won an award at an APAA show. Two years ago he resumed painting with watercolors. Although watercolor demands more technical knowledge than does oil painting, Dr Coggeshall said it's easier to travel with the little equipment required. For those combining painting with vacations, there are many planned workshops with artists in all parts of the world and, "these painters are very tolerant of beginners and their problems," the doctor said. He recommends workshops given by Milford Zornes in Mexico and Hawaii.

His advice to aspiring artists is, "If one is patient and is able to endure the first two or three years of frustration, he or she will produce an acceptable picture. To a large extent, the ability to express on paper or canvas with a pencil or brush is a learned skill." He gives much credit to his teachers for helping him develop his artistic talent. "If you are interested in taking up painting as a hobby, I urge you to take some lessons. It will shorten the learning time and will serve to keep your interest alive," he said. He fondly recalls the instruction of Bud Biggs, of Dallas; and Otis Dozier, of the Dallas Museum of Fine Arts School.

As the 1969 APAA president and later as a member of the organizations's executive board, he had the opportunity to observe the work of many physicians in all parts of the country. In his judgement, "Of all professions, physicians excel in all forms of art work."

Dr Coggeshall isn't the only artist in his family. Wife, Dotty, has always been interested in art of all kinds and enjoys needle work, mosaics, sculpture and jewelry-making. Their children, Howard and Judy, have similar interests. Pola, Dr Coggeshall's daughter-in-law, exhibited Western bronze sculptures in the physician's most recent show.

An essay by Winston Churchill refers to painting as a means of escaping the tensions and worries of daily toils. In "Painting as a Pastime," Sir Winston states, "I consider myself very lucky that late in my life I have been able to develop this new taste and pastime. Painting came to my rescue in a most trying time."

Dr Coggeshall's feeling about painting as a pastime is ". . . painting is the best way to push the worries out of your life and let your mind go free."

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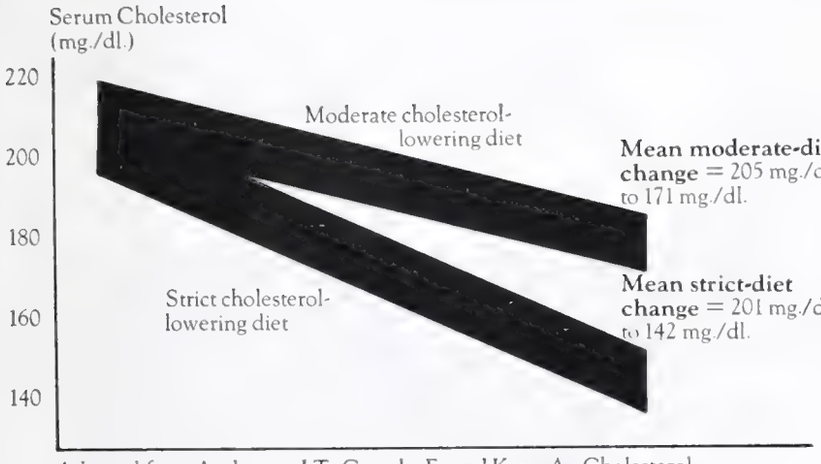

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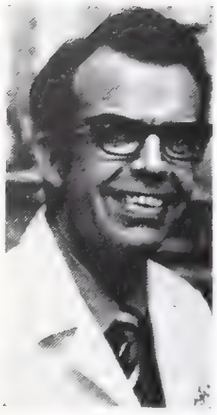
Medical Newsmakers



Edward N. Brandt, Jr., MD

After serving as Dean of Medicine at the University of Texas Medical Branch in Galveston for the past three years, EDWARD N. BRANDT JR., MD, has been appointed Executive Dean of the Medical Branch. Dr Brandt will coordinate all academic programs, coordinate all research activities, and direct supporting facilities and resources. Before joining the Medical Branch in 1969, the new Executive Dean was second in command at the University of Oklahoma Medical Center. He earned his medical degree from the University of Oklahoma School of Medicine and a PhD degree in biostatistics from the University of Oklahoma Medical Center.

Sam A. Nixon, MD

First Lady BETTY FORD was in Houston in October for dedication ceremonies of the new facilities of the University of Texas M.D. Anderson Hospital and Tumor Institute. The ceremony marked completion of five new facilities at M.D. Anderson. Mrs Ford helped open the 330-bed hospital wing, an outpatient clinic building, an expanded radiation therapy center and two new floors of cancer research space.

Margery W. Shaw, MD, JD

SAM A. NIXON, MD, has been elected speaker of the American Academy of Family Physicians (AAFP) Congress of Delegates. He has served two terms as AAFP vice speaker and is also a member of the Committee on Constitution and Bylaws. Dr Nixon chairs the Committee on Members' AAFP Insurance and Financial Services. He previously was a member of the Ad Hoc Committee on Quality Assurance for Ambulatory Care. He has represented Texas as a delegate in the AAFP Congress and held the presidency of the Texas Academy of Family Physicians. He is an Academy fellow and a diplomate of the American Board of Family Practice.

CHARLES A. LEMAISTRE, MD, Chancellor of the University of Texas System, has been elected to the Board of Directors of the Damon Runyon-Walter Winchell Cancer Fund. Dr LeMaistre has been a professor of internal medicine at the University of Texas Southwestern Medical School and has held administrative positions in the University of Texas System since 1966. He is a consultant to the Bureau of Health Manpower of the Department of Health, Education and Welfare. The Runyon Fund was created by Walter Winchell in memory of his friend, Runyon, who died of cancer in 1946. When Winchell died in 1972 the fund was renamed. Contributions to the fund are devoted to research into causes and control of cancer.

MARGERY W. SHAW, MD, JD, has been named acting dean of the Graduate School of Biomedical Sciences, the University of Texas Health Science Center at Houston. Dr Shaw succeeds ALFRED G. KNUDSON, JR., MD who has resigned as dean to become director of the Institute for Cancer Research in Philadelphia, effective Dec 1, 1976. Dr Shaw has been director of the University of Texas Health Science Center Medical Genetics Center since 1971. Her research interests include studies of human chromosomes and legal issues of genetics and medicine.

For the second time in 44 years, BERTHA M. DAVIS, MD, and R. LEE CLARK, MD, have received college degrees together. Dr Davis, Mrs Clark in private life, and Dr Clark were awarded honorary doctorates from Ricker College in Houlton, Me, during the college's commencement exercises in August. They last received degrees together in 1932, when both earned medical degrees from the Medical College of Virginia. Dr Clark, president of the University of Texas M.D. Anderson Hospital and Tumor Institute, received an honorary doctor of laws degree. Dr Davis, an anesthesiologist, received an honorary doctor of humane letters.

R. Lee Clark, MD, and Bertha M. Davis, MD

ORVILLE CODY THOMAS, MD, has been chosen president-elect of the American College of Allergists. Dr Thomas is a faculty member of the University of Texas Graduate School of Biomedical Sciences and Baylor College of Medicine, Houston, and a senior consultant to the McGovern Allergy Clinic.

RITA PARIS, certified medical assistant, administrative and clinical, of Fort Worth has been elected vice speaker of the House of Delegates of the American Association of Medical Assistants. Mrs Paris, who heads the x-ray and laboratory departments at Coffey Clinic in Fort Worth, also performs secretarial duties for W. D. Marrs, MD, a general surgeon and general practitioner. Mrs Paris is an officer in the 18,000 member association working to increase the education and professionalism of medical assistants.

AL TASCH, MD, a Taft physician for more than 35 years who is now semi-retired from his private practice, has been honored with a Citizenship Award from the Taft Kiwanis Club. Dr Tasch, who has been a county health officer for 14 years, returned to Taft in 1941 after receiving his medical degree from the University of Illinois and completing his internship in San Antonio. Before returning to Taft he was also director of the Psychopathic Division at Parkland Hospital in Dallas and chief of the Nueropsychiatric Division at an Air Force Hospital.

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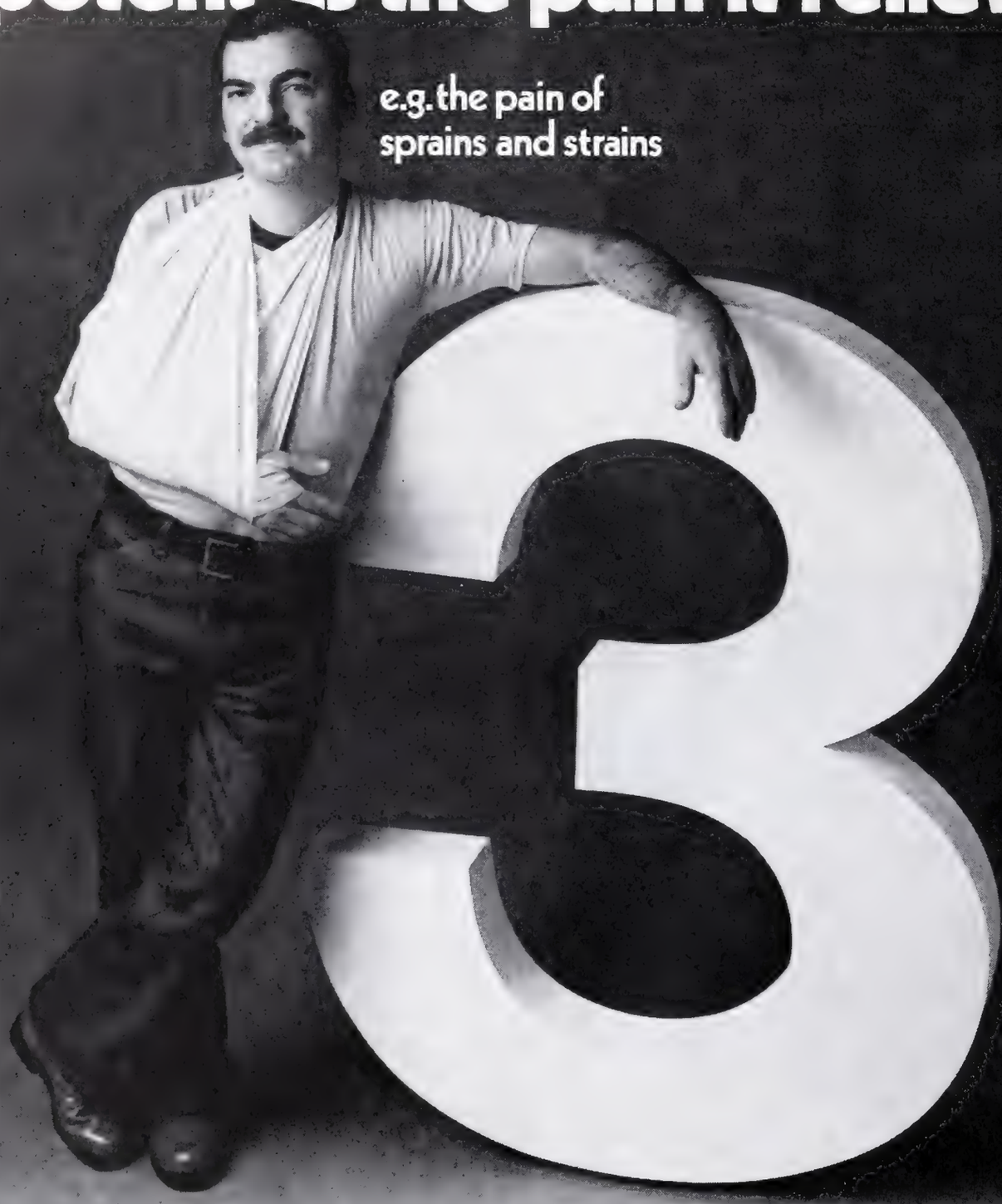

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MEDICINE AND THE LAW

SUMMARY OF SELECTED TEXAS TRIAL VERDICTS IN MEDICAL PROFESSIONAL LIABILITY CASES

From time to time the legal counsel of the Texas Medical Association will supply summary verdicts in selected medical professional liability cases. Following are summary verdicts in three Texas cases:

$100,000 verdict against patient's surgeon and general practitioner (74-66-B).

The jury found the general practitioner negligent in failing to advise the patient to have periodic blood and serum electrolyte studies performed, and for failing to advise the surgeon that the patient had been taking Diazide. The general practitioner was absolved of negligence in writing the patient's Diazide prescription "P.R.N.", in failing to advise her to have an electrolyte study performed prior to surgery, and in failing to advise the hospital and anesthetist that the patient had been taking Diazide.

The surgeon (who entered into compromise settlement during trial) was found negligent by the jury in failing to order electrolyte studies of the patient prior to her surgery and in failing to detect her hypokalemia.

The patient's case against the non-physician defendants, the hospital, the anesthetist and the drug store, failed with several no negligence findings. The jury found the hospital was not negligent in failing to require a medical history prior to administration of pre-operative drugs and anesthetic agents and failing to require that electronic monitoring equipment be used to check the patient's heartbeat during surgery. The jury found the anesthetist was not negligent in failing to obtain a drug history before administration of pre-operative drugs, to intubate the patient's trachea during surgery, to maintain ventilation during anesthesia and surgery, and to use an electronic monitoring device to observe the patient's heartbeat during surgery.

The jury found the drug store was not negligent in failing to call the prescribing doctor before refilling the Diazide prescription.

The trial court had submitted to the jury, separate, but similar, definitions of negligence for the multiple defendants. The definitions were essentially ordinary care in the same or similar circumstances.

The trial court said the general practitioner and the surgeon were held to standards of "a physician of ordinary prudence." The trial court said the hospital was held to standards of "that degree of care and skill used by a hospital of the same general type." The trial court said the anesthetist was held to standards of "a certified registered nurse anesthetist of ordinary prudence." The trial court said the drug store was held to failure on the part of its pharmacist to use "that degree of care and skill exercised by a pharmacist of ordinary prudence." The trial court also instructed the jury that the anesthetist "was not a guarantor that her administration of anesthetic agents would be successful."

Verdict for defendant surgeon (912,123)

The jury decided against a patient with peritonitis. The jury found the defendant surgeon was not negligent in handling the patient's internal organs following the patient's appendectomy and was not negligent in proper diagnosis of the patient's medical condition during his second hospitalization.

In the charge to the jury the trial court defined ordinary care to mean "that degree of care which general surgeons of ordinary knowledge and skill, en-

gaged in the practice of medicine, would use in the treatment of patients under the same or similar circumstances."

The trial court instructed the jury that in order for the surgeon's negligence to be a proximate cause of the patient's injury, the jury must find that the evidence shows such causation by a "reasonable medical probability." The trial court also instructed the jury that the mere fact that a bad result may have followed the medical treatment rendered to the patient does not, in itself, permit the jury to find that the surgeon was negligent in treating or administering to the patient.

The trial court also instructed the jury that if a general surgeon exercises the degree of skill, care and learning required of him, he cannot be found negligent simply on the basis of the results obtained, although the jury may consider the results if it finds that the result was proximately caused by the negligence of the surgeon.

The trial court instructed the jury that if it found from the credible evidence that other general surgeons recognized more than one method for the treatment of the patient, then the surgeon was at liberty to select any of such methods.

The trial court instructed that a doctor is not negligent merely because he made a choice of a recognized alternative method for the procedure he followed in the treatment of a patient, if he exercised the required skill and care in administering and following the method of his choice, and that this would be true even though other medical witnesses may not agree with him on the choice he made.

Verdict for defendant surgeon (75-1466)

The jury found that the defendant urologist was not negligent in operating on the patient (prostatectomy) rather than in ordering a course of treatment. The jury also found that the surgeon was not negligent in failing to disclose to the patient the information a reasonable doctor of the same training or specialization in the same or similar community would have disclosed to a patient regarding either risks incident to the proposed prostatectomy or non-surgical alternatives. The jury also found the surgeon was not negligent in the method, technique or skill by which he performed the prostatectomy.

Concerning "informed consent" the jury was instructed that this means "the furnishing by the physician to the patient of sufficient information about the nature of the illness, and the results of the tests, x-rays, and examinations made by the physician or surgeon or others in connection with the diagnosis of the nature of the illness and the necessity for surgery, and of the risk and complications, if any, which might be involved in the patient refusing or accepting the proposed medical treatment or surgery so that it will enable the patient to execute a knowledgeable, intelligent, and informed consent either to submit to proposed medical or surgical treatment or to refuse medical or surgical treatment."

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Medicine in literature

EDITOR'S NOTE: The topic of this month's bibliography is computed tomography. Copies of these and other articles pertaining to computed tomography are available from the Memorial Library.

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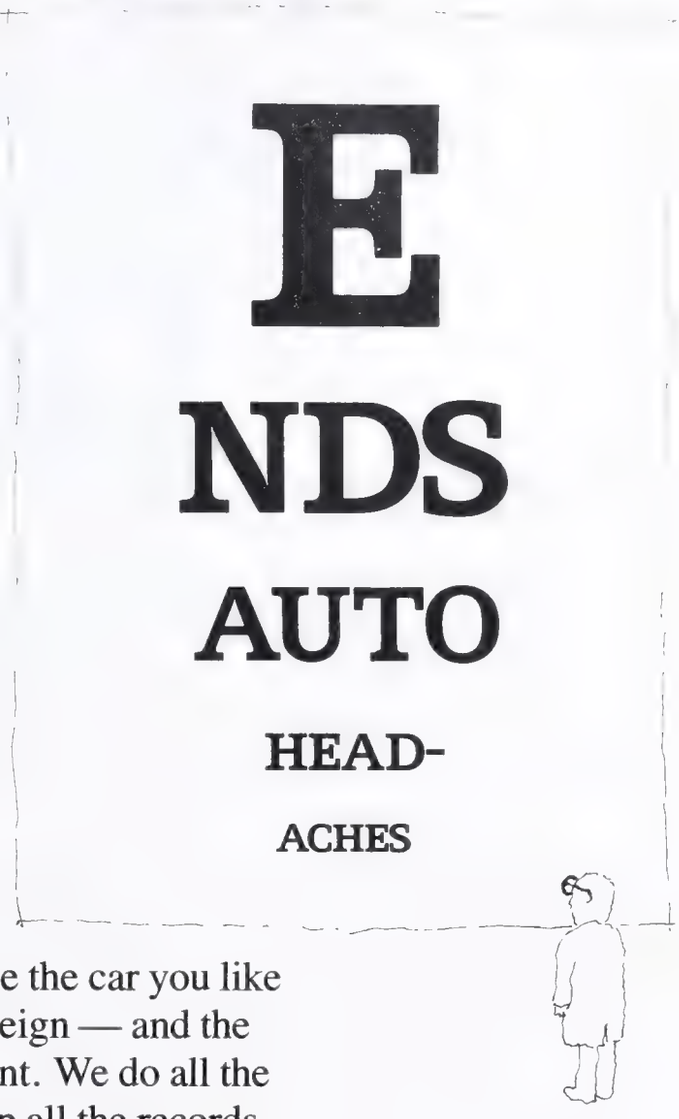

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RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

J. E. Hogan
Big Spring, 1909-1976

Irene T. Nesbitt
Dallas, 1880-1976

D. W. Smith
Beaumont, 1923-1976

George Turner
El Paso, 1893-1976

Harold Wood
Houston, 1906-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession, and the people of Texas so faithfully over the years.

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Recent deaths

J.E. Hogan, MD

Dr John E. Hogan, co-founder and clinical director of Malone & Hogan Clinic and Hospital in Big Spring, Tex, died April 21, 1976, at the age of 66.

Dr Hogan was a native of Nacogdoches. He was a graduate of Stephen F. Austin State Teachers College (1930) and The University of Texas Medical Branch (1934). He served internships at Southern Pacific and Jefferson Davis hospitals, Houston. He moved to Big Spring in 1937 as a general surgeon.

Dr Hogan served seven years on the Big Spring school board. He was a former president of both the Downtown Lions Club and the local Chamber of Commerce. In 1951 he was United Fund Campaign director. He also served on the YMCA board and was a member of the First Baptist Church.

The doctor's professional memberships included the American College of Surgeons, Southwest Surgical Congress, Pan Pacific Surgical Association, American Medical Association, Permian Basin (Howard-Martin-Glasscock) County Medical Society, and the American Group Practice Association (charter member).

Surviving Dr Hogan are his wife, Dixie Dudney Hogan, Big Spring; two daughters, Mrs Boone Powell, Jr, of Abilene and Mrs Pat Larkey of Vancouver, British Columbia; one brother, N.A. Hogan of Houston; two sisters, Mrs Vernon Ball of Houston and Mrs Hubert Chandler of Nacogdoches; his mother, Mrs T.H. Honea of Nacogdoches; and six grandchildren.

Irene T. Nesbitt, MD

Dr Irene Thornton Nesbitt, an honorary member of Texas Medical Association, died March 27, 1976, at the age of 96. She was a resident of Dallas.

Dr Nesbitt, who was retired, had been a pediatrician 52 years. She practiced 10 years in Honey Grove, Tex. She moved to Dallas in 1925, where she had been on the pediatric staffs at Baylor University Medical Center, Parkland Memorial Hospital and Children's Medical Center of Dallas.

She was born in Fayetteville, NC, in 1880, and received her medical degree from the Woman's Medical College in Baltimore, Md, in 1908.

Dr Nesbitt was an honorary member of Dallas County Medical Society, and a member of the American Medical Association, Texas Pediatric Society, Dallas Pediatric Society, Dallas Southern Clinical Society and Southern Medical Association. She also was a member of the Dallas Altrusa Society and the Episcopal Church of the Incarnation.

Surviving Dr Nesbitt are two granddaughters, Mrs Kathy Davis of Houston and Mrs Karen Payne of Hillsboro, Ill, and three great-grandsons.

Dr Hogan

Dr Nesbitt

Dr Smith

D. W. Smith, MD

Dr Denton Weymouth Smith, who had practiced in Beaumont for the past 25 years, died of a heart attack in Mexico City, April 4, 1976.

At the time of his death, Dr Smith, 53, was attending a convention of Ducks Unlimited, a sportsmen's organization.

The otolaryngologist was a native of Merryville, La. He attended Southwestern University, Georgetown, Tex, from 1938 to 1940, and he was graduated from the University of Southwestern Louisiana, Lafayette, in 1941. He received his MD degree from Tulane University School of Medicine, New Orleans, in 1945.

Dr Smith's internship was at Jefferson Davis Hospital, Houston, (1945-1946) and his residency was at the Eye, Ear, Nose and Throat Hospital, New Orleans (1949-1951). He also did postgraduate work at the University of Southern California, Los Angeles.

Dr Smith served with the US Army Medical Corps from 1946 to 1948. He was a member of the American Academy of Ophthal-

Dr Turner

Dr Wood

mology and Otolaryngology (diplomate), Jefferson County Medical Society, Texas Society of Ophthalmology and Otolaryngology and was a past president of the Otolaryngology Section of TMA. He also was a member of the American Medical Association.

Surviving are Dr Smith's wife, Merlyn Killingsworth Smith, Beaumont; two sons, D. Weymouth Smith, Jr, of Nacogdoches and Robert L. Smith of Dallas; two stepdaughters, Susan Haisten of Austin and Penny Haisten of Ruidoso, NM, and a stepson, George W. Haisten of Denton.

George Turner, MD

A past president (1953-1954) of Texas Medical Association, Dr George Turner of El Paso, died May 31, 1976.

Dr Turner, 83, was born in Iredell, Tex. He received his preliminary education in Iredell and Hico and attended Southwest Texas Normal College, San Marcos, and The University of Texas. He studied at the Medical Department of Texas Christian University, Fort Worth, where he received his medical degree in 1918.

Dr Turner served an internship at All Saints Hospital, Fort Worth, and took postgraduate training at Yale Army Laboratory School, New Haven, Conn, and the Chicago Post Graduate School, Chicago. During World War I he served as a captain in the Army Medical Corps. He was a major in the medical reserves for 15 years.

Dr Turner began his radiology practice in El Paso in 1920. He was a fellow of the American College of Radiology and a member of the El Paso County Medical Society, the American Medical Association, the Rocky Mountain Radiological Society, the Radiological Society of North America, the Texas Radiological Society, the Texas Society of Pathologists and the American Society of Clinical Pathologists. In October, 1952, Governor Shivers appointed Dr Turner to the State Board of Health.

Dr Turner's civic activities in El Paso included participation in the Chamber of Commerce and the school board, which he served as president. He was a Master Mason, a member of the Scottish Rite and Shrine, the Methodist Church and the El Paso Country Club.

Survivors include his wife, Nina Johnson Turner, and two daughters, Jeanne Bowman, MD, and Ann Buddington; three granddaughters, a grandson and three great-grandchildren, all of El Paso.

Harold Wood, MD

Dr Harold Wood, Houston, died April 14, 1976, at the Diagnostic Center Hospital.

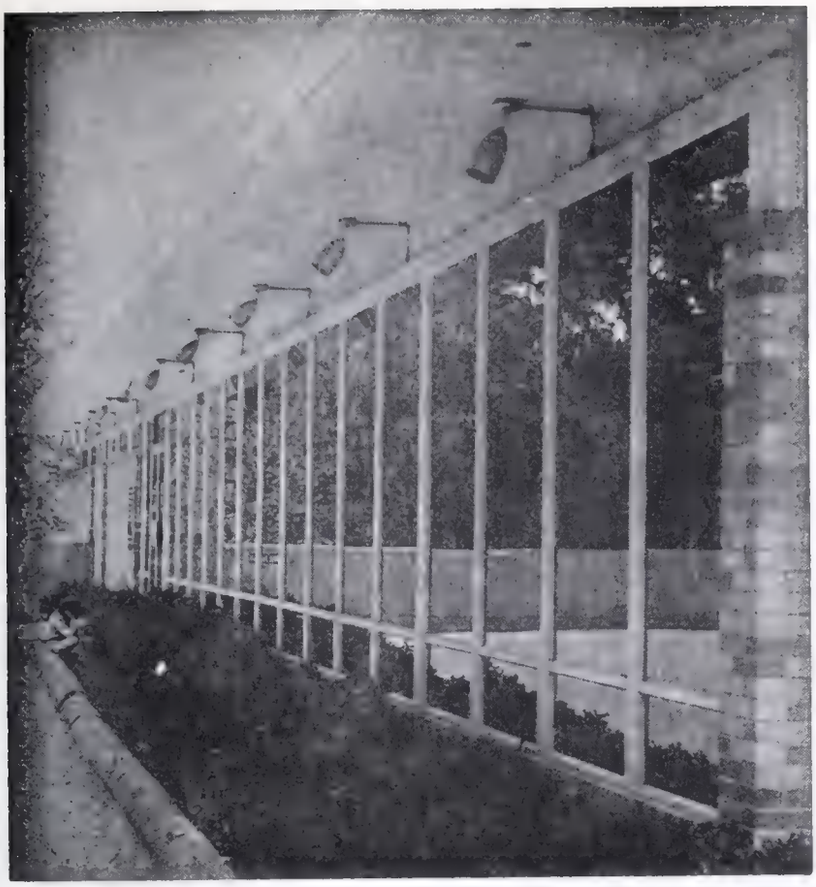
Dr Wood, 69, was owner and president of Wood Scientific and Laboratory Medicine Data, Inc, in Houston.

The physician was a native of Memphis, Tenn. He was graduated from the Tufts University School of Medicine, Boston, in 1933. His internships were at Newton Hospital, Newton Lower Falls, Mass, and at Rhode Island Hospital, Providence, RI. During 1935-1936, Dr Wood served a residency in pathology at Duke University Medical Center, Durham, NC. Dr Wood taught at Duke and also studied and taught at the Medical College of South Carolina in Charleston.

Dr Wood moved to Houston in 1951 and became an associate professor of pathology at Baylor College of Medicine. He previously had practiced in St Louis and Phoenix, Ariz.

He was a commander in the US Naval Reserve from 1941 to 1945. The doctor also was a member of the Harris County Medical Society; American Medical Association; Massachusetts Medical Society; Texas Society of Pathologists, Inc; American Society of Clinical Pathologists; American Association of Pathologists and Bacteriologists; Houston Society of Clinical Pathologists; California Society of Pathologists; the College of American Pathologists; the American College of Nuclear Medicine (charter member); American Society of Cytology; and the American Pathology Foundation.

Surviving Dr Wood are his wife, Margaret M. Wood; daughter, Linda M. Wood; and sons, Vincent T. Wood and Mark H. Wood, all of Houston.



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Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequer and/or severity of grand mal seizures m require increased dosage of standard ar convulsant medication; abrupt withdraw may be associated with temporary increase in frequency and/or severity of seizures. Advise against simultaneous ir gestion of alcohol and other CNS depres sants. Withdrawal symptoms (similar to those with barbiturates and alcohol) hav occurred following abrupt discontinuan (convulsions, tremor, abdominal and mu cle cramps, vomiting and sweating). Ke addiction-prone individuals under carefi

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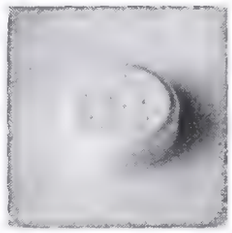

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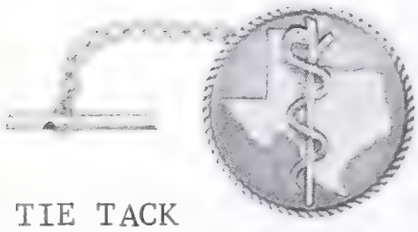

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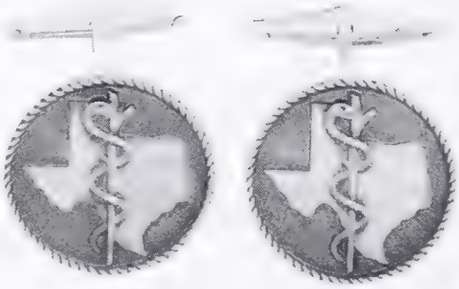

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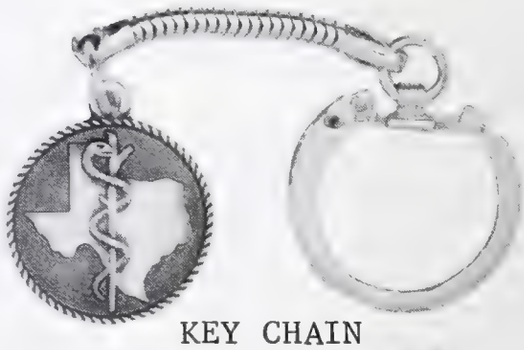

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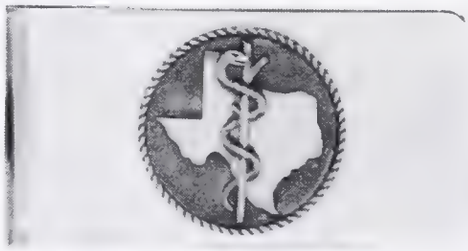

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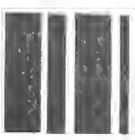

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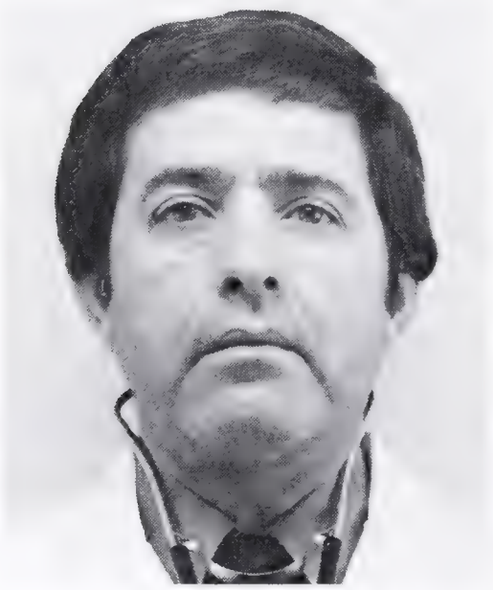

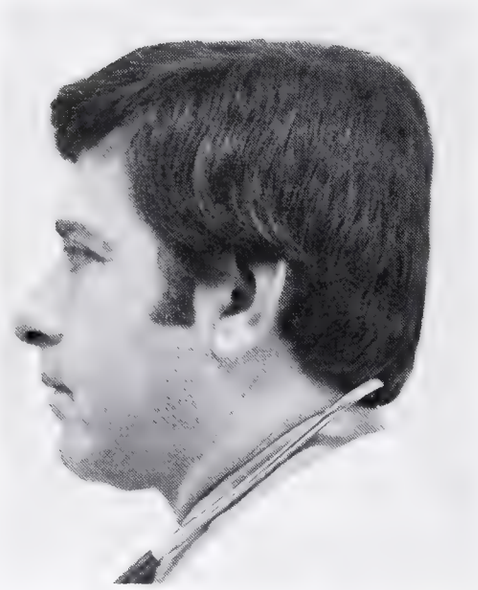

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WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

LOCUM TENENS WANTED: Doctor interested in GP work with OB. To cover one doctor on weekly, monthly or any time of the year basis. Financial arrangement negotiable. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834. 512-876-5236.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL INTERNIST WANTED: Board certified or eligible to join expanding successful group. Busy hospital and office practice. Houston environs. Excellent salary and fringe benefits. Contact Doctors Clinic, 1501 Broadway, Galveston, Texas; attention Robert Walsh, Administrator.

MID-GULF COAST: INTERNIST with cardiology sub-specialty; family practitioner needed to practice in very progressive medium sized community on Gulf Coast. Excellent schools, churches with a friendly area population. New hospital with 60 beds under construction now. Excellent sports and recreation near by with hunting and salt and fresh water fishing. Plan guaranteed income for two years to acceptable people. Call 713-543-3367 or write P.O. Box 405, El Campo, Texas 77437.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE OR OPHTHALMOLOGIST. Attractive office in ideal location with excellent public exposure on corner with easy access. 1370 square feet at 30c per square foot per month in an underserved middleclass area of Irving. Formerly occupied by internist. Contact Litt Perry, DDS, 209 South O'Conner, Irving, Texas 75060; 214-259-4580.

WANTED: GP OR FP. Potentially, lucrative practice, suburban area of about 20,000. Willing to negotiate. Paul A. Grandy, M.D., North Lamar Medical Clinic, 10805 North Lamar Blvd., Austin, Texas 78753; 512-837-2640.

PSYCHIATRIST BOARD CERTIFIED OR ELIGIBLE. $36,000 to $40,000. Texas license required. Building a better and more dynamic program in State Hospital. Ideal family living town of 30,000, good schools, recreation, mild weather. Maurice A. Watts, M.D., Clinical Director, Big Spring State Hospital, Box 231, Big Spring, Texas, 79720; 915-267-8216.

WANTED: PEDIATRICIAN to join a multispecialty group with two board pediatricians. Guaranteed salary $30,000 plus many fringe benefits. Contact F. L. Phillips, M.D., Glen Valley Clinic, 7630 Bellfort, Houston, Texas 77061.

ORTHOPEDIC SURGEON, El Paso, Texas (population 410,000). Join ultra busy 43 year old orthopedist in 17 man multi-specialty group practice (only 1½ years old) with own hospital and attached large clinic building. Excellent year round sunny dry climate. Guaranteed minimum $50,000-$55,000 first year. Call collect between 2-6 p.m., David L. Lewis, M.D., 915-592-0201 or write David L. Lewis, M.D., 6201 El Risco Drive, El Paso, Texas 79912.

SAN JACINTO METHODIST HOSPITAL, BAYTOWN, TEXAS. Anesthesiologist, solo or group practice. Home of Exxon, U.S. Steel; major expansions underway. High income. Bay area near Houston. Outstanding schools, colleges. Contact Administrator, 1101 Decker Drive, Baytown, Texas 77520; 713-422-3405.

PSYCHIATRIC RESIDENCY in approved three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed in-patient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: First year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

PSYCHIATRIST FOR ESTABLISHED West Texas MHMR Center. Provide clinical leadership and training in programs emphasizing outpatient services. Excellent professional and paraprofessional staff. MH facility construction in 1977. Exceptional public schools and state university. Call or write James Young, 244 N. Magdalen, San Angelo, Texas 76901; 915-655-5674.

WANTED: BOARD CERTIFIED OR ELIGIBLE OBSTETRICIAN-GYNECOLOGIST to join multispecialty clinic in Houston. Starting salary competitive, early partnership available. Contact Business Manager, Glen Valley Clinic, 7640 Bellfort, Houston, Texas 77061; 644-3344.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

PEDIATRICS—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

EMERGENCY MEDICINE CAREER OPPORTUNITY—for physician wanting full-time long term 2nd career. Trauma center for Central Texas. Ideal weather and location. Starting salary $42,000 plus excellent benefits. Immediate openings. For more info send CV to CTMF, P.O. Box 13023, Austin, Texas 78711.

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WANTED: OPHTHALMOLOGIST with retinal training to share excellent facilities with two other eye men. Near Gulf Coast, 90 miles from Houston. Unopposed in industrial area with over 125,000 population. Please reply to Ad-642, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

CORPUS CHRISTI, TEXAS: October 1st opening for one full-time MD to complete five-man ED team, 500 bed JCAH approved teaching hospital in Corpus Christi, a town of 225,000 in South Texas. Wanted—settled physician over 40 who has been in private practice, minimal surgical background. Guaranteed $55,000 and a 7% annual increase. 40 hour work week. Fringe benefits include one month paid vacation and time for post graduate study. Contact: Mrs. Sarah Welch, Vice President for Nursing Services, Memorial Medical Center, P.O. Box 5280, Corpus Christi, Texas 78405. Telephone 512-884-4511.

FAMILY PRACTITIONER WANTED TO ASSOCIATE with well established solo practitioner to handle patient overflow. Alternate weekend coverage, etc. Space available, reasonable. X-ray and full lab in building. Desire experienced FP with holistic approach. No hospital practice necessary. Please reply to Ad-652, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436.

OPENINGS FOR TWO EMERGENCY PHYSICIANS in community of 70,000 in West Central Texas. Excellent medical staff and administrative support. Usual schedule is 15-12 hour shifts per month. Fee-for-service with $48,000 annual guarantee. Fine hunting and fishing area. Contact Bill Bass, M.D., 1506 S. Concho Drive, San Angelo, Texas 76901 or call 915-653-6741.

FAMILY PRACTICE/GENERAL PRACTICE—Excellent private practice opportunity exists in northeast Dallas bedroom community of 80,000 in affiliation with new full service 106-bed private hospital. Liberal salary guarantees, interview trip and relocation expenses are offered. Residents enjoy excellent recreational facilities, superior public schools, and a wide range of housing. Send detailed Curriculum Vitae to Ad-629, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

NEEDED: PHYSICIANS to practice at Mexia State School, located in central Texas just 30 minutes east of Waco. Many fringe benefits—retirement, sick leave, vacation, 40-hour week, group insurance. Salary range $34,300 to $37,300, depending on qualifications. An equal opportunity employer. Contact Medical Director, Mexia State School, P.O. Box 1132, Mexia, Texas 76667. 817-562-2821.

WANTED: SPANISH SPEAKING GENERAL PRACTITIONER to share busy work load; family, general, industrial medicine. No OB or surgery. Rotating night calls, $36,000 starting salary, no investment required, liberal professional association fringe benefits. Call collect. H. Pena, M.D., North Main Medical and Surgical Clinic Association, 3301 North Main, Fort Worth, Texas 76106; 817-625-2791.

STUDENT HEALTH SERVICE PHYSICIAN—Beautiful campus, competitive salary and benefits, East Texas recreational area. New clinic in planning. Contact William G. Langston, M.D., P.O. Box 3058, SFA, Nacogdoches, Texas 75691; 713-569-4008.

QUALIFIED FAMILY PRACTITIONER: Well established clinic including lab and x-ray. Join five other GPs in busy office and hospital practice. Located in a dynamic, growing area of Dallas. Many benefits that only group practice can provide. Salary negotiable with subsequent partnership offered. Please reply to Ad-655, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77036.

FAMILY PRACTITIONER FOR MULTISPECIALTY CLINIC in Houston's fastest growing Southwest area. Salary guarantee and early partnership. Excellent radiographic and diagnostic facilities in new clinic building adjacent to hospital. Contact Pierre Gendron, 6630 DeMoss, Houston, Texas 77074.

BOARD CERTIFIED AND/OR BOARD ELIGIBLE INTERNISTS: Board certified and/or board eligible internists sought for Chief and Deputy Chief, Department of Medicine, U.S. Public Health Service Hospital, Galveston, Texas and other areas of Gulf Coast. Affiliated with University of Texas Medical Branch in terms of medical student, intern and resident teaching. Employment in PHS Commissioned Corps, if eligible, or under Federal Civil Service System with liberal benefits and adherence to equal employment practices. For information call or write Thomas Shinnick, M.D., Director, U.S.P.H.S. Hospital, 4400 Avenue N, Galveston, Texas 77550; 713-763-1211.

GENERAL PRACTICE—SOLO PRACTICE: Rural area, progressive community, friendly people, excellent school system. Modern 30 bed hospital. One other doctor on active medical staff. Rent free office space. Good hunting and fishing. Contact Administrator, Throckmorton County Memorial Hospital, P.O. Box 487, Throckmorton, Texas 76083; 817-849-2151 or 817-345-3206, Dr. Luis A. Barranco.

WANTED: DIRECTOR, CITY-COUNTY HEALTH DEPARTMENT. Licensed to practice in Texas, M.D., M.P.H. Serving a population of 120,000 in North Central Texas. Reply to: Chairman, Board of Health, Wichita Falls City-Wichita County Public Health Center, 1700 Third Street, Wichita Falls, Texas 76301.

DALLAS AREA OPPORTUNITIES: Outstanding private practice opportunities exist for general internists and family practitioners in the suburban community of Plano, Texas. Plano's population has increased from 17,000 to over 46,000 in the last six years. Excellent schools, new 193 bed hospital, physician offices across the street. Be a part of this dynamically growing community. For further details call collect or write to: John C. Daniels, Director, Professional Relations, Plano General Hospital, 3901 West 15th Street, Plano, Texas 75075; 214-423-6800.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXCELLENT OPPORTUNITY FOR ONE OR TWO FPs. North Central Texas, small town, large lake. Large cities nearby. Exceptional recreation on doorstep. Clinic adjacent to new hospital. New schools, churches, homes. On-call time with three others. Solo or group. Salary guarantee. Growing area. Help needed badly. Please reply to Ad-663, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MEDENCO, A HEALTH CARE COMPANY that owns and operates hospitals throughout Texas, has many physician opportunities. A handsome financial package is available for the interested physician. Contact Richard C. Holdren or Stephen C. Smith at 3800 Buffalo Speedway, Greenway Plaza, Houston, Texas 77098 or telephone toll free at 1-800-392-2278.

PHYSICIAN WANTED: FAMILY CARE AND CHRONIC. Hospital facilities available ten miles. Clinic space available downtown Kemp. Pharmacy available. 45 miles southeast Dallas. Close to Cedar Creek Lake, fastest growing recreational-retirement area in Texas. Projected 100,000 population by 1980 in area. Country club, golf course, three miles. Excellent opportunity. Please reply to Edmund Horton, Ph., P.O. Box 449, Kemp, Texas 75143; phone 214-498-2011.

WANTED—INTERNIST for group in Central Texas. Salary $40,000 per annum or 60% of fees collected whichever is greater. Opportunity for partnership available after initial contract period. Please reply to Ad-660, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER NEEDED in Central Texas town to join group of eight. Guaranteed income of $40,000 per annum based on percentage of fees. Bonus of $5,000 at end of year. Please reply to Ad-661, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PEDIATRICIAN WANTED to join group in town of 12,000 with two OB-GYN men. Salary open. Please reply to Ad-662, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

WANTED: LOCUM TENENS for 6 months to 18 months to help me in a busy general practice. Modern clinic, new 80 bed hospital. Present associate leaving Jan. 1st. Contact: M. A. Treadwell, M.D., Eastland, Texas; 817-629-2633.

EMERGENCY MEDICAL SERVICES INSTRUCTOR—School of Allied Health Sciences and Orthopaedics, The University of Texas Medical School at San Antonio. To work with orthopaedic faculty and incumbent EMS instructor, conducting primary and continuing education in emergency medicine for medical and dental students, Health Science Center personnel, and paramedical personnel of the City of San Antonio and Bexar and surrounding counties. Assist in coordinating training programs, catalog audio-visual aids, maintain teaching equipment, and participate in actual course instruction. Prefer college degree and two years' experience in emergency medical services training and/or program and class coordination. Send resume to: Charles A. Rockwood, Jr., M.D., Professor and Chairman, Orthopaedics, The University of Texas Health Science Center at San Antonio, 7703 Floyd Curl Drive, San Antonio, Texas 78284. An equal opportunity/affirmative action employer.

WANTED: M.D. for busy downtown Houston industrial clinic, 4 man group. Partner retiring, May 1977. $48,000. Opportunity full partnership. Night/weekend calls to your liking. Position not filled by June '77 would consider locum tenens 2-8 months. Malpractice insurance paid. Under 40 years old. Please reply to Ad-667, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER WANTED in Ranger, Texas, location I-20 between Fort Worth and Abilene. New 36 bed hospital, new schools under construction, Junior College (EMT and LVN training). Lake Leon, 7 miles with country club. Call collect 817-647-1156.

CORPORATE INTERNIST, $45,000. Supervise executive health program with strong emphasis on preventive medicine. Major oil company. ER PHYSICIAN $55,000. Gulf Coast resort city. RESEARCH DIRECTOR to $50,000. Monitor and review drug products. PATHOLOGIST. Reference lab S.W. Texas. Send curriculum vitae to Marilyn Blaker, MEDEX, 5805 Richmond, Houston, Texas 77057. 713-789-1550.

Situations Wanted

WE PRESENTLY HAVE SEVERAL PHYSICIANS, GPs and specialists on file who wish to practice in Texas on a salary basis, with a view to future partnership. How may we help? Medi-Search (recruiting physicians exclusively), 309 Wichita Title Building, Wichita Falls, Texas; 817-322-5269.

ALLERGIST: 32, board certified in pediatrics, in second year university allergy/immunology fellowship. Desires position primarily pediatric allergy. Group, partnership, clinic practice. Available summer 1977. Please reply to Ad-656, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON—Board certified, FACS, FLEX New York, 41, wants to relocate. Prefers Dallas or Houston or vicinity. University trained. Four years of private practice. Desires solo, association, or group practice. Please reply to Ad-657, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

SITUATION WANTED: 36 year old ophthalmologist wishes to relocate in Texas. University of Toronto graduate 1965 with Canadian fellowship in ophthalmology 1969. Interested in general ophthalmology practice. Please reply to E. P. Sholdra, M.D.,F.R.C.S.(c), 120 Holland Avenue, Ottawa, Ontario, Canada K1Y0X7; telephone 1-613-729-4375.

CARDIOLOGIST: 33—FLEX. Echo and stress testing expertise. Knowledge of Spanish. Looks for hospital based or group practice. Available July 1977. Prefers South Texas, other areas considered. Please reply to Ad-664, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON: 34, board eligible, FLEX, solo, associate, some GP. Licensed Ohio, Pennsylvania, Alabama. 205-578-4838 home; 205-578-4610 office.

LADY DOCTOR—SPECIALIZED IN OB-GYN. Completed residency in June 1976. Passed FLEX from N.Y. State in December 1975. Passed written board exam in June 1976. Moving with family. Seeks associate/partnership in Austin. Please reply to Ad-666, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL INTERNIST who will finish residency from Scott and White in June 1977, wishes placement in group practice. Prefer Dallas-Fort Worth or Austin area but will consider other offers. Please reply to Ad-668, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

FOR SALE OR LEASE—Beaumont, Texas. Medical office and practice, one or two doctors; prosperous port, petrochemical industry, shipbuilding and steel plant. One billion dollars capital investment in area last six months; hub of regional rice growing and cattle raising. Population 130,000; state university, new public library and public transportation system; 85 miles from Houston. Suitable for all specialties; prefer GP or internal medicine. Contemporary, prize winning design; new roof, air conditioning and painting; 2973 sq. ft., soundproofed interior walls. Ample parking, including adjacent rental property. Practice 25 years old, 17 years same location. Unlimited income potential, especially with OB or surgery. Price includes practice, furnishings, adjacent lot and rental property. Owner retiring. Texas license required. Terms available for sale or lease. Please reply to Ad-659, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FOR SALE: Due to death of doctor, large established family practice of Dr. J. Edwards Prewett grossing over $100,000 annually. Knowledge of Spanish helpful. FOR LEASE: Long-term lease on clinic building, 2404 South IH 35. Equipment available. Approximately 2,700 sq. ft. including separate dentist's office under lease. Scenic outdoor patio, rock garden, large beautiful trees, plenty parking. Write Mrs. J. Edwards Prewett, 407 Almarion, Austin 78746; or call residence 512-327-0662 or doctors office 512-444-5501.

NORTHEAST SAN ANTONIO—54,000 population and growing. No MDs, above average income. 1700 sq. ft., air conditioned, carpet, 6 exam rooms, reception, business office. Three year old building, pharmacy in building. Some financial assistance. W. H. Gibson, 656-1166, 651-6449.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

CONSULTANTS IN FINANCING, BANKING AND FINANCIAL MANAGEMENT. Banc-Services Corporation, Thomas G. White, President, 10400 N. Central Expressway, Suite 102, Dallas, Texas 75231; 214-369-3196.

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Pasadena, Texas 77504

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Editorials

CONSULTATION OR REFERRAL AND THE PRIMARY CARE PHYSICIAN

Few physicians today would deny that the practice of medicine is more legalistically oriented and more governmentally controlled than ever before. If we have ever needed professional unity, integrity, and the practice of professional ethics, it is now. It would be well to pause and rethink two concepts that have been a part of ethical medicine for so long that our familiarity with them has almost led to contempt. Yet, it is the close adherence to these principles of "consultation" and "referral" that has enhanced and preserved the dignity and quality of our profession. Misunderstanding of these two terms has caused bitterness and frustration. Proper professional interaction and a cooperative attitude for the patient's welfare is our goal. Let us restate the definitions and review what is meant by these terms.

While in private practice I was often aware of the problem arising out of a misunderstanding of these ideas. This has become increasingly apparent since I have become involved in teaching medical students and family medicine residents. In our department at The University of Texas Medical Branch we teach and define the role of a primary care physician as he relates to his patient and other members of his profession. We teach the concept that the primary care physician should consider his patient to be in one of three categories. In the first the patient is treated by the primary care physician. In the second the patient is to be treated by the primary care physician with the advice and guidance of the consultant. In the third the patient is to be referred to a specialist who will treat the patient during that episode of illness. Our residents are taught to know their own levels of competence and to act in the patient's best interest. Often their requests for consultation are treated as referrals. This causes the resident much concern.

Dorland's Illustrated Medical Dictionary defines consultation as "a deliberation of two or more physicians with respect to the diagnosis or treatment in any particular case,"[1] but it gives us no definition of referral. Webster defines refer and referral as "to assign."[2]

In "A Case for Consultation," Evans and Sutton do not discuss the medical clinical specialist consultant, but their observations on consultation are appropriate. They quote Caplan's use of the term as meaning "a process of interaction between two professional persons—the consultant, who is a specialist, and the consultee, who involves the consultant's help in regard to a current work problem with which he is having some difficulty and which he has decided is within the other's area of specialized competence. In that type of professional interaction the consultant accepts no direct responsibility for implementing remedial action for the client, and the professional responsibility for the client remains with the consultee just as much as it did before he asked the consultant for help. Another essential aspect of this type of consultation is that the consultant engages in the activity not only in order to help the consultee with his work problem . . . but also in order to add to the consultee's knowledge and to lessen areas of misunderstanding, so that he may be able in the future to deal more effectively on his own with this category of problem."[3] In this consultee-consultant relationship the consultee is free to accept or reject the consultative help knowing that he retains the responsibility for and accountability to the patient. The consultant is thus cast into a role of support of the sense of professional adequacy of the consultee and the belief that the consultee can master the problem. He guides the consultee by helping to define the problem and by suggesting alternate solutions or outcomes.

Some court decisions have indicated that under certain circumstances a treating physician is obliged to seek information about the patient from physicians who provided prior care, especially if the earlier treatment may have contributed to complications arising from current treatment. A physician who has knowledge or an indication that some prior treatment may increase the risk of future treatment has a duty to consult with the physician who gave the prior

treatment.[4] There is also a legal duty on the part of the consultee or referrer to consult with his colleague concerning recommendations for follow-up care. The general practitioner essentially acknowledges his lack of expertise in referring a patient to a specialist; he should be mindful of his limited knowledge and consult the specialist for guidance in the followup treatment.

The foregoing statements either express or imply a cooperative relationship of help, teaching, and learning in a consultation. The quality of performance of the physician who has sought consultation will be improved. He is expected to increase his own expertise in handling the same problem in the future. It is not intended that he interrupt his participation in management, but it is evidence that he recognizes his need for assistance at the proper time. Therefore, the essence of a consultation is a partnership in management.

A consultation is a joint venture, but a referral is not. After completion of a referral or assignment, the selection of a physician for future problems is made by the patient.

Close adherence to these simple principles is an obligation of the members of the medical profession. It is necessary for the primary care physician to be specific in making his wishes known to his consultant. It is mandatory that he furnish all information at his command. An adequate exchange of information, an understanding of what is expected, and clear communication will do much to strengthen our profession in the time of crisis.

M. L. Ross, MD, Galveston, Chairman,
Department of Family Medicine,
The University of Texas Medical Branch.

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TEXAS MD GRADUATES WATCH AS RESIDENCY DOORS SWING SHUT

Texas may be locking its own medical graduates out of the state at the very time when primary care physicians are in short supply.

A paradox? Of course, and yet there is a way out of the contradiction: *We need to adopt and fund an effective program for expanding primary care residencies in the state.*

If the problem is so clear and the solution so sensible, how did we get into this situation in the first place?

The story is really one of success.

For many years a major concern of the Texas Medical Association has been to assure the continuing supply of well-qualified physicians, particularly in the area of primary care and family practice. When Texas' population began increasing rapidly, TMA supported expansion of medical education in Texas. In addition to supporting full funding for increased enrollment in existing schools during the past decade, we've supported development of three new medical schools—in San Antonio, Lubbock, and Houston.

Because of efforts statewide, the number of physicians that Texas is graduating each year has more than doubled since 1969. Between 1972 and 1980 Texas medical schools will have graduated 6,248 new physicians—almost the same as the number of Texas graduates practicing in the state as of Dec 31, 1972.

But, we've got to go one step further to be truly successful. The number of medical school graduates continues to increase, but the number of primary care residencies has not kept pace with the number of graduates. As physicians know, an MD degree is only the first phase of a physician's education. Most physicians are required to take at least three years of graduate training after completing medical school.

During the past two years the Texas Medical Association's Council on Medical Education and Hospitals has considered ways to get the most doctors practicing in Texas in the least amount

of time with the most efficient use of the tax dollar. It quickly became evident that we did not have an adequate number of primary care residency positions. Many Texas medical school graduates have been forced to leave the state for primary care residency training. *The Council's study led to its conviction that more training programs in Texas will mean that more physicians will remain in Texas to practice.*

Others also see the need for expansion of residencies. In fact in 1974 the Texas College and University Coordinating Board's Task Force on Medical and Dental Education recommended increased state support to continue augmentation of primary care education in all Texas medical schools for undergraduate medical students and resident physicians in hospitals and in other clinical facilities.

Concluding a two-year study, the Council on Medical Education and Hospitals has developed a plan for development and expansion of primary care residencies in Texas. The Council is urging that the Texas Legislature support state funding for these residencies beginning with the 1977-79 biennium. With full funding of proposed residencies, the present 388 primary care residencies could be increased to 618 by 1979. The Council proposes increases in primary care residencies affiliated with the six Texas schools for doctors of medicine.

Although the federal government now funds some of our state's primary care residencies, most federal funds will end in July 1977. (Federal and other funding sources will still be available for approximately 600 non-primary care residencies, however.)

Obviously, the critical need for more physicians is in the area of primary care and family medicine. Medical school deans report that an increasing number of students wish to enter family practice, yet Texas had only 85 available residency positions this year for the 112 Texas students who hoped to enter family practice. It is a shame that some of them had to leave the state for training.

Look at a cost effectiveness comparison: A recent proposal for a new medical school in Texas estimates the cost at $100 million during the eight-year development of the school, and that still offers no increased primary care residency programs in the state. Our graduates would still be required to leave the state for the final phase of their training, and statistics indicate that they could remain in the general area where they undertake this training.

The cost of a primary care residency has been roughly estimated at $30,000 per year. Does the state have enough money for both a new school and residency expansion?

The TMA believes that all existing schools should be optimally funded before development of any new schools.

Because we want more doctors to serve Texans in the quickest possible time, we support full funding and expansion of primary care residencies in Texas.

William F. Ross, MD, San Benito,
Chairman, TMA Council on Medical Education and Hospitals.

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Articles scheduled for publication in January are on fetal monitoring, neurological manifestations of systemic lupus erythematosus, the premedical advisory process, leptospirosis in West Texas, massive bleeding from angiomyolipoma of the kidney, intermittent neurogenic claudication, and sex and the preschooler.

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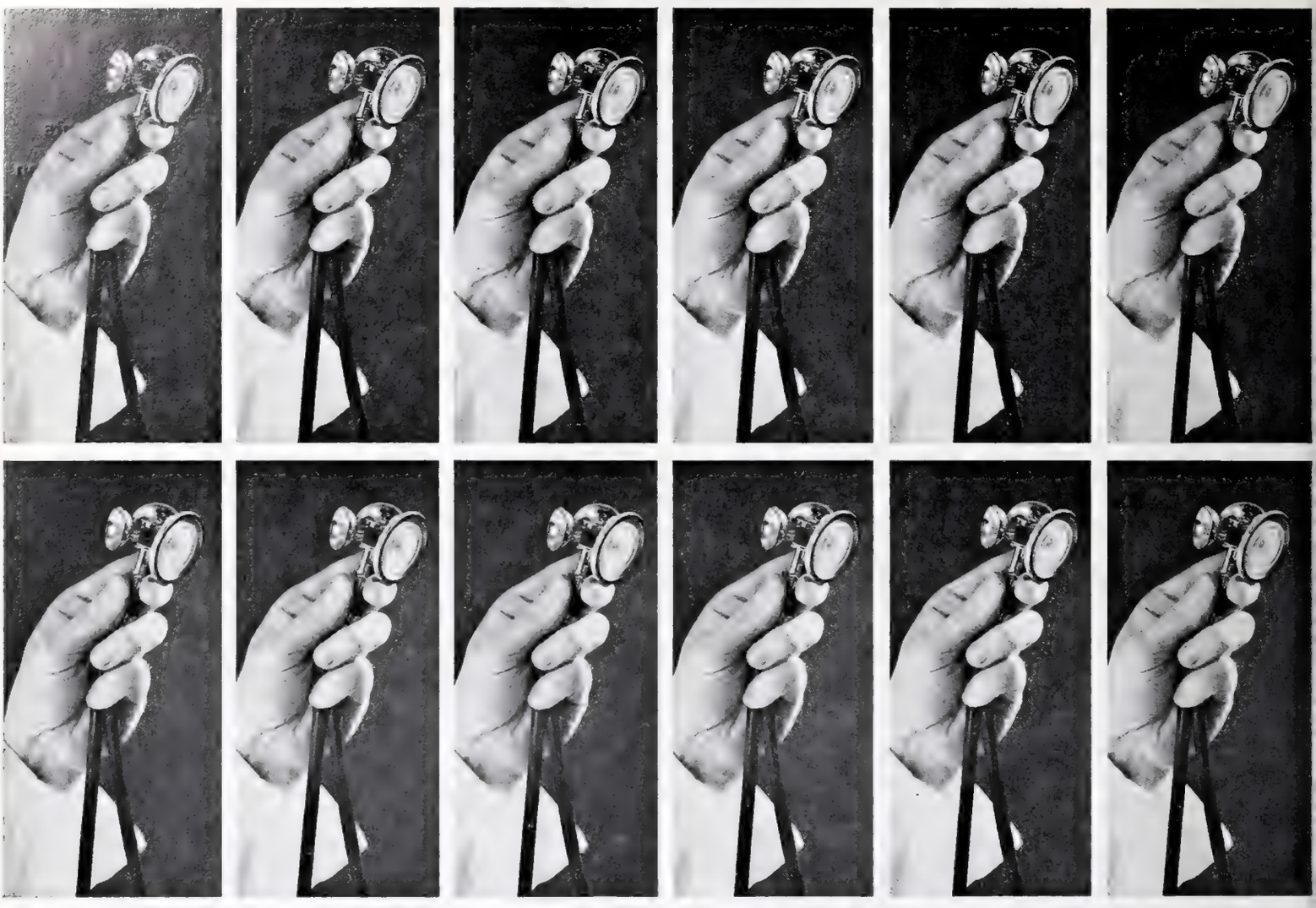

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Where did that surprising statistic originate?

From the first survey designed to assess the nutritional status of the entire U.S. population. The conclusion above was the most striking result reported in the preliminary findings released in January 1974.

Were they really dealing with a true sample of the entire U.S. population?

Those conclusions were based on a sample of 10,126 people—a probability sample established by the U.S. Bureau of Census to reflect the country's total population, regardless of race or income.

Among those 95% with substandard iron intake, how low was their intake actually?

For whites and blacks, for both sexes, for both income levels, the mean intake of iron (as a percent of the standard) for the 1-5 year age group ranged from 60 to 69%. Typically, then, 95 children out of 100 have iron intakes that are only ⅔ of the standard.

Whose iron intake standard were they using?

The standard set by the Food and Nutrition Board of the National Academy of Sciences for this group.

Implication of all this?

That iron deficiency among preschoolers is anything but rare and signs like mental apathy, lethargy, irritability, behavior problems, may be telegraphing iron deficiency.

Suggesting iron supplementation?

Not necessarily. In many instances this situation can be corrected by proper diet and, obviously, this is the preferred route. When dietary improvement is not attainable, consider a supplement.

But consistent use of an iron supplement is difficult to achieve.

Compliance is a problem, as so much of the recent data suggest.* INCREMIN with Iron Syrup has a pleasant flavor which encourages consistent use.

Is this cited study generally available?

Yes, from the Office of Information, National Center for Health Statistics, 5600 Fishers Lane, Rockville, MD., 20852. Request "First Health and Nutrition Examination Survey", 1974, DHEW Pub. No. (HRA) 74-1219-1.

*B. Blackwell: The Drug Defaulter. *Clinical Pharmacology and Therapeutics* 13:841 (1972).

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l-Lysine HCl	300 mg
Thiamine HCl (B_1)	10 mg
Pyridoxine HCl (B_6)	5 mg
Vitamin B_{12}	25 mcgm
Sorbitol	3.5 Gm
Alcohol	0.75%

DOSAGE: Prevention of iron-deficiency anemia—Children and Adults—1 tsp. (5 cc) daily. Treatment of iron deficiency anemia—Children: 1 tsp. t.i.d.; Adults: 1 tsp. q.i.d.

SUPPLY: Bottles of 4 fl. oz. and 16 fl. oz.

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Delegates discuss variety of issues in November meeting

NEWS

The Texas Medical Association's House of Delegates considered a dues increase, continuing medical education, and cost containment at its scheduled Nov 6-7 sessions in Austin.

Association dues

A dues increase for TMA members was approved effective Jan 1, 1977. The delegates voted to increase dues by $50 making TMA dues $180 annually. The dues increase was recommended by Ben R. Keller, Jr, MD, treasurer, to help finance TMA efforts in the interest of physicians and medicine.
The increase will help efforts in areas of professional liability insurance, health planning laws, national health insurance, and other challenges to the practice of medicine.

Continuing medical education

The House of Delegates approved establishment of an accreditation subcommittee to evaluate continuing education programs for physicians in Texas. The delegates also supported the concept of voluntary continuing education, but decided to continue an ongoing evaluation of a continuing medical education membership requirement for TMA members.

National health insurance

A motion that instructed the AMA not to propose a national health insurance plan in the 95th or any future Congress was defeated. Instead, the Council on Medical Legislation will continue to monitor national health insurance in Congress, with the concurrence of the delegates.

FTC request

Reporting to the House, the Board of Trustees stated that the action of the Federal Trade Commission (FTC) against the AMA, which alleges

that the ban on solicitation by physicians is an illegal restraint on competition, has resulted in a demand for TMA documents.
The FTC requested all documents from the AMA and TMA relating to medical ethics, discipline, solicitation, and advertising. TMA entered into a protective order with the FTC authorizing disclosure of information only to FTC personnel.
The House of Delegates voted to commend the Legal Counsel for work in the FTC matter and referred the entire issue to the Legal Counsel and the Board of Councilors for continuing study.

Travis Smith, MD, left, Speaker, and Milton V. Davis, MD, Vice Speaker, address the 1976 Fall House of Delegates meeting in Austin.

Special Committee on Alcoholism and Drug Abuse

The House of Delegates approved the first plans for the newly-created Special Committee on Alcoholism and Drug Abuse. The committee is recommending that TMA enter the educational process at levels of teacher in-service training. The committee also plans to communicate with Texas medical school deans and other educational personnel in Texas of the need for increased emphasis on substance abuse in the curricula.
A survey of adult drug misuse (age 25-65), and a survey on alcoholism among teenagers are also being considered by the committee.

Medicare

TMA voted to ask the AMA and other state organizations to help seek amendments to regulations and/or laws which require a physician to obtain the patient's signature on the 1490 Medicare claim forms for services when payment is requested.

Texas Department of Public Welfare

The delegates voted against recommendations of the Joint Advisory Committee on Government Operations of the Texas legislature (Hobby Clayton Commission) that the Texas Department of Public Welfare be broken into two departments. The Council on Tax-Financed Health care reported that the action would increase bureaucracy and the costs of the Medicaid program.

NEWS

Committee on the Impaired Physician

A new Committee on the Impaired Physician was created by the House. The committee will be composed of nine physicians who will maintain liaison with the Texas State Board of Medical Examiners and make recommendations to the Council on Medical Legislation.

The Board of Councilors recommended the committee stating that "sufficient evidence exists to demonstrate that physicians who suffer from alcoholism, drug addiction, mental and emotional instability, senility, and certain other types of physical or mental impairments pose serious problems to the physician himself, his family, his patients, his hospital, and the medical society."

The primary charge of the committee will be to identify, strongly urge treatment, and review rehabilitation provided to impaired physicians within the state of Texas.

Maternal and Child Health Committees

The delegates approved combining the Committee on Maternal Health and the Special Committee on Perinatal Health to form the Committee on Maternal and Child Health.

The new committee will be charged with collecting, reviewing, and drawing appropriate conclusions from data on maternal and perinatal morbidity and mortality within the state; reviewing and commenting on governmental laws, regulations, and activities which impact on maternal and child health in the state; and serving as the TMA source of recommendations and advice concerning maternal and child health problems.

PSRO poll

The Council on Tax-Financed Health Care Programs reported that the Secretary of the Department of Health, Education, and Welfare must act to redesignate a PSRO area or areas in Texas or have an open hearing based on results of the PSRO poll in Texas. The Texas Institute for Medical Assessment (TIMA) is prepared to submit its application to be designated as the PSRO, even though it will probably be April, 1977, or later before a planning or conditional PSRO designation is made and in operation in Texas. (Since the House of Delegates session, officials in Region VI, Department of Health, Education, and Welfare, have reported the results of the PSRO poll. Texas physicians have voted heavily in favor of a single statewide PSRO. The physicians cast 11,058 valid ballots, with 1,526 votes favoring multiple PSROs and 9,532 votes favoring a single, statewide PSRO.)

TEXPAC

Highlights of the 1976 membership program of TEXPAC were reviewed by the House.

TEXPAC received AMPAC's top membership awards for 1974 and 1975, and is expected to be among the top state PACs for 1976. For the seventh consecutive year, TEXPAC has been supported by more physicians than the preceding year.

President's address

In his remarks, L. S. Thompson, Jr, MD, reminded delegates that the professional liability insurance crisis is the number one priority of TMA. Dr Thompson said important steps toward a solution of that crisis are unity within the profession in dealing with the issue, communication with elected officials that a solution must be found, and forward movement of the TMA legislative program.

Access to health care

The House voted to allow the Council on Medical Education and Hospitals responsibility to seek solutions to the problem of access to health care in Texas.

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NEWS

Higher Education Commissioner says new medical schools aren't needed

More medical schools won't satisfy Texas' need for more doctors, said Dr Kenneth Ashworth, Texas Commissioner of Higher Education.

There is no quarrel with the fact that Texas needs more physicians, and that these physicians are needed particularly in the primary care specialties, and geographically, in rural and some inner-city locations, Dr Ashworth said.

However, the full impact of the increased production of medical graduates in the state will not be fully felt until the mid-1980s, because of lead time to admit students and the length of the medical education program, he said.

Dr Ashworth made his statements in presentations to the Coordinating Board, Texas College and University System, and the TMA Council on Medical Education and Hospitals.

He recommended that Texas fund more residency programs in Texas, and fully fund the existing Texas medical schools.

"Because of a shortage of residency places in Texas, we are now exporting graduates for residency training in other states.

"Texas spends between $100,000 and $150,000 to educate an MD, then exports him or her to residency programs in other states. In effect, the taxpayers of Texas are subsidizing health care delivery in other states. To create additional medical schools in lieu of financing residency programs would futher increase this subsidization of other states while drawing off resources we could use to keep graduates in Texas," Dr Ashworth said.

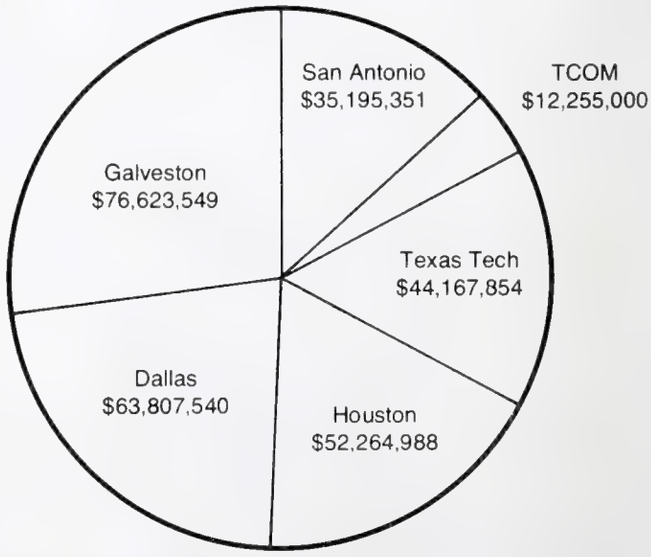
"The financing of residency programs is also an appropriate response to the problem of maldistribution. Creating residencies in community hospitals in more sparsely populated areas should result in more graduates locating practices in some of those areas," he said.

Additional residencies would be possible if state support is given to the smaller hospitals that cannot afford to finance residency programs, Dr Ashworth said.

The staff study indicates there is no reason the Coordinating Board should change its positions adopted nearly two years ago, which said no more new medical schools are needed, the Commissioner said.

His study showed that Texas has spent more than $284 million during the past ten years on public medical facilities.

State	$ 87,072,191
Fed	48,278,530
Tuition Revenue Bonds	67,843,461
Endowment & Hospital Revenue Bonds	31,954,580
Other	49,165,520
Total	$284,314,282



Total Expenditures on Physical Plants for Public Medical Facilities in Texas 1965-1975
(Does not include locally supported Teaching Hospitals or M.D. Anderson)

In 1967 Texas ranked 17th among states in medical school expenditures per $1 million of personal income. By 1974, Texas ranked second in the nation, surpassed only by Vermont, Dr Ashworth said.

Eight years ago four Texas medical schools graduated 321 doctors. By 1981 the number is expected to increase to 963, the Commissioner said.

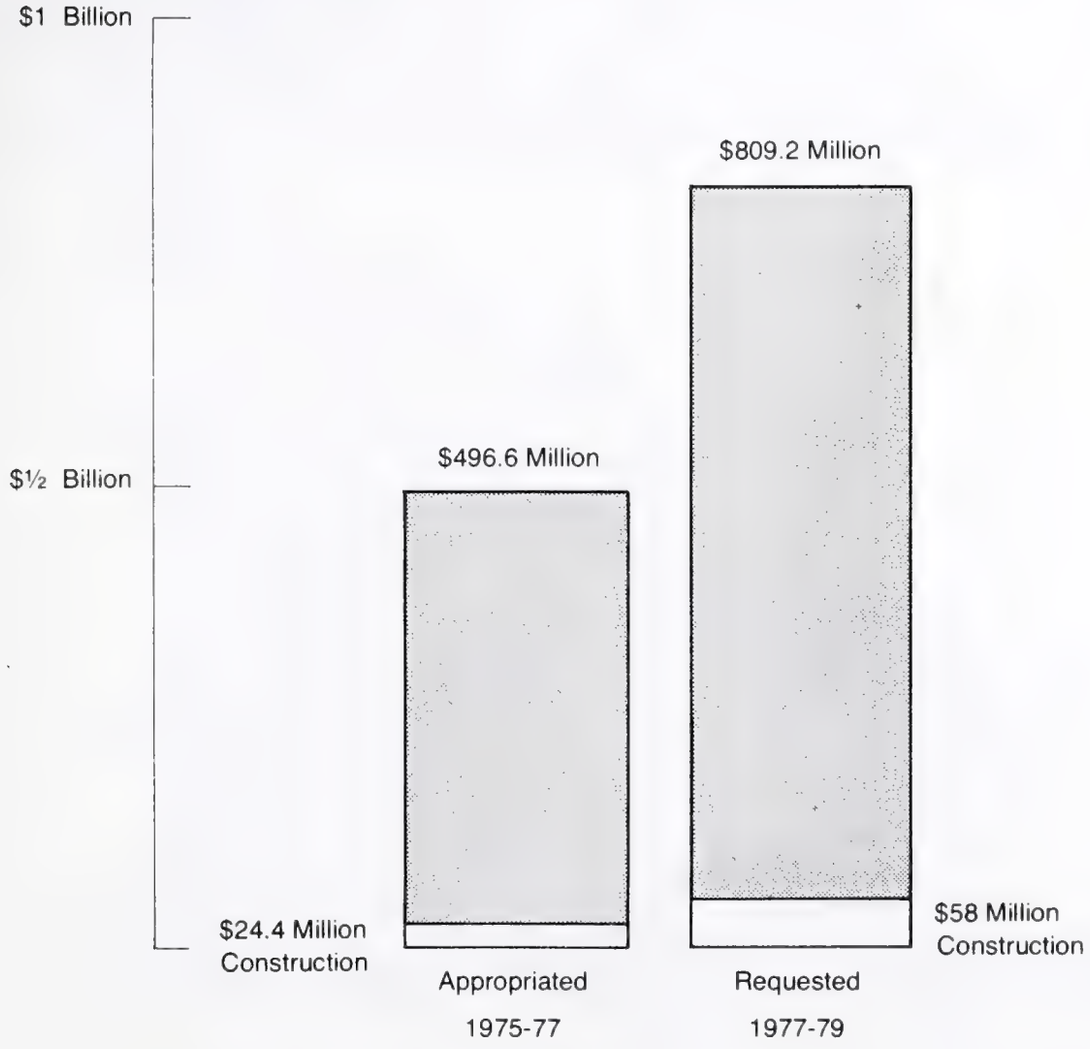
The number of licensures to practice medicine in Texas has also grown. In 1968, 12,242 were licensed to practice, and in 1974 the number had grown to 15,622, an increase of more than 27 percent.

"In 1974 there were 23 counties in Texas without an active MD. However, eight of these counties did have a DO licensed to practice medicine in the county. The total population of the 15 counties without an MD or a DO was 25,300, or .2 percent of the state's population.

Four of the counties had a population of 700 or less inhabitants, and only two of the 23 counties experienced growing population between 1960 and 1970. Fourteen of the counties experienced population declines of more than 17 percent between 1960 and 1970.

"We need to look at the supply of physicians in Texas," Dr Ashworth said. In 1970 it was estimated that the United States had a shortage of 50,000 physicians. In Texas, the number of MDs and DOs registered to practice in the state rose from 1970 to 1975 by 26 percent to 17,507, he said.

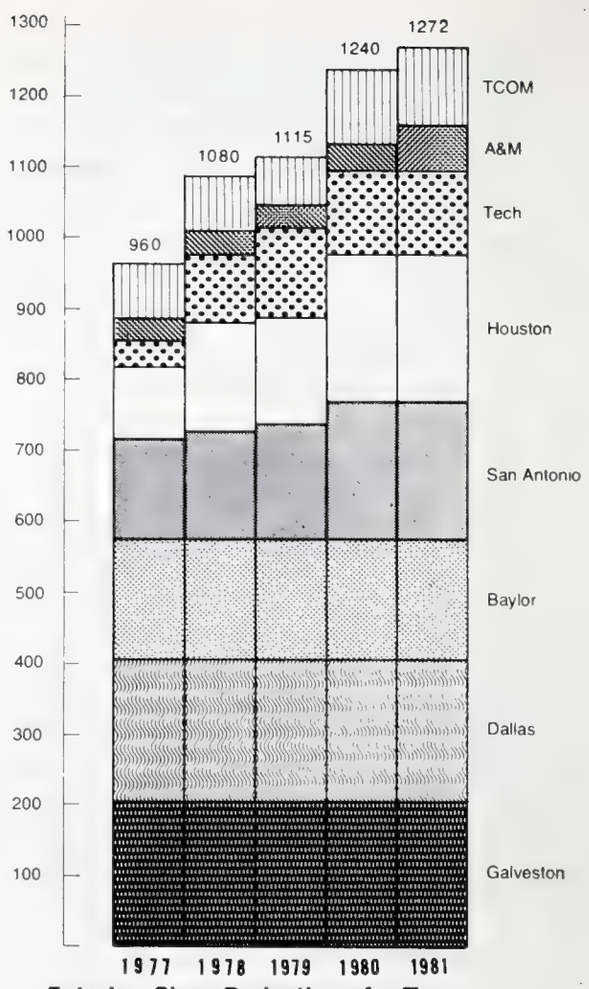
Full funding of existing schools to bring them to optimum capacity is the best way to meet medical education needs in Texas, Dr Ashworth said.



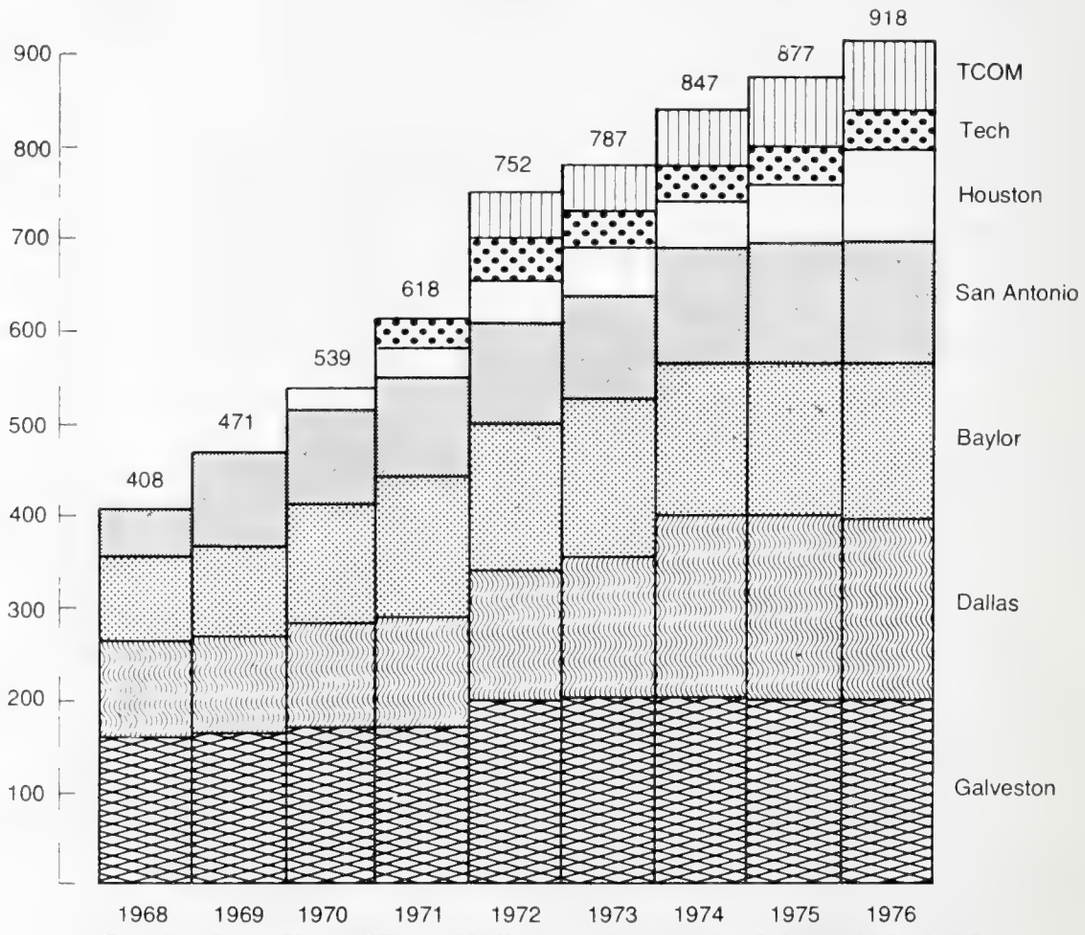
Texas Biennial Appropriations for Medical Education

NEWS

"We believe that state funding of residencies more directly addresses the questions of improving distribution of doctors and improving health care delivery in underserved areas than creating new medical schools. "We believe that creating a ninth medical school in Texas would almost certainly compete with and detract from expansion plans and residency funding," the Commissioner said. "This is not to say we are meeting all of our needs. But we are making progress faster than the nation as a whole. We have expanded to do even better. Full development of the existing Texas medical schools could eventually produce 1,400 or more new physicians each year," he said. Therefore, in the next session of the Texas Legislature, the staff feels that there is no need for the Coordinating Board to alter its previous positions of no new medical schools, Dr Ashworth concluded.



Entering Class Projections for Texas Medical Schools 1977-1981



Entering Class Sizes of Texas Medical and Osteopathic Schools 1968-1976

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NEWS

Texas A&M will begin medical program in 1977

Texas A&M University's new medical education program has been awarded provisional accreditation by the American Medical Association/Association of American Medical Colleges Liaison Committee on Medical Education, paving the way for enrollment of the first medical students in Fall 1977.

The survey team visited Texas A&M earlier this year to evaluate the program. Texas A&M's medical program is being organized in association with Baylor College of Medicine, Scott and White Memorial Hospital, and the Veterans Administration.

The Veterans Administration has awarded Texas A&M grants totaling $17,071,609 under provisions of the Veterans Administration Medical School Assistance and Health Manpower Training Act of 1972. The act is designed to help relieve the shortage of physicians and allied health personnel generally and particularly in the Veterans Administration system.

Texas A&M Dean of Medicine, James A. Knight, MD, said the provisional accreditation includes authority to enroll 32 students in the first class.

In the Texas A&M program students will follow a pre-clinical curriculum during what would normally be junior and senior years on the main Texas A&M campus, and then continue with the clinical phases of their medical education for two years at locations away from College Station. Those locations include Scott and White in Temple and Veterans Administration hospitals in Temple, Waco, and Marlin.

1976 retirement plan deadline is Dec 31

The deadline for establishing a retirement trust HR 10 (KEOGH) plan for 1976 for a self-employed physician is December 31, 1976.

The Texas Medical Association offers the KEOGH TMA Members Retirement Trust.

For more information about the retirement plan, contact Paul D. Gray, Texas Medical Association, 1801 N Lamar Blvd., Austin, 78701. The telephone number is 512-477-6704.

Texas delegation will attend AMA meeting in December

The Texas delegation to the American Medical Association House of Delegates meeting Dec 5-8 in Philadelphia will propose eight resolutions for AMA consideration.

The Texas delegation will include ten voting delegates.

The delegates will introduce resolutions supporting the creation of an AMA Section on Medical Schools, supporting AMA efforts to obtain legislative relief to assure continued income tax exemptions on student scholarships and loans, and asking for the AMA to continue to work for action on the use of the CPT.

The delegates will also introduce resolutions stating TMA is opposed to abuse of regulatory power through "transmittal letter" practices, and asking that admission to hospitals must be under primary designation of a duly qualified physician.

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*__Indications:__ Based on a review of this drug by the National Academy of Sciences-National Research Council and/or other information, the FDA has classified the indications as follows:

Possibly Effective:

1. For the relief of symptoms associated with cerebral vascular insufficiency.
2. In peripheral vascular disease of arteriosclerosis obliterans, thromboangiitis obliterans (Buerger's Disease) and Raynaud's disease.
3. Threatened abortion.

Final classification of the less-than-effective indications requires further investigation.

Composition: Vasodilan tablets, isoxsuprine HCl, 10 mg. and 20 mg.

Dosage and Administration: 10 to 20 mg. three or four times daily.

Contraindications and Cautions: There are no known contraindications to oral use when administered in recommended doses. Should not be given immediately postpartum or in the presence of arterial bleeding.

Adverse Reactions: On rare occasions, oral administration of the drug has been associated in time with the occurrence of severe rash. When rash appears, the drug should be discontinued. Occasional overdosage effects such as transient palpitation or dizziness are usually controlled by reducing the dose.

Supplied: Tablets, 10 mg.—bottles of 100, 1000, 5000 and Unit Dose; 20 mg.—bottles of 100, 500, 1000, 5000 and Unit Dose.

NEWS

More than 118,000 receive swine flu vaccine

More than 118,000 Texans had received either the monovalent or the bivalent vaccine from the national swine flu immunization program as of Oct 15, according to the Texas Department of Health Resources. That figure excludes Harris and Bexar Counties.

Vaccine for the national program continued to arrive in small amounts in late November. Lon Gee, health program specialist for the Department of Health Resources Immunization Division, said larger shipments were expected during November, and "We hope that by early December we would have vaccine waiting for us to find someone to give it to."

Production of the vaccines has been discontinued by the Manufacturers. Texas Gov Dolph Briscoe declared October, November, and December 1976 as Immunization Action Months, and urged all Texans to avail themselves of the free protection from the flu.

Study Commission votes no to patient compensation fund

The Texas Medical Professional Liability Study Commission voted no to an earlier proposal of a state-managed fund to pay "catastrophic" claims at its Nov 5 meeting in Austin. The defeated proposal would have established a "Patients Compensation Fund"administered by the Texas Commissioner of Insurance.

Texas doctors buying basic malpractice insurance would have been required to contribute to the fund. The TMA position was against the concept of establishing a state-managed compensation fund.

At the Nov 5 meeting the commission also voted to recommend a law requiring malpractice suits to be filed within one year after a medical injury has been detected or within three years after the alleged negligent treatment, whichever comes first, and excluding minors.

The commission was to have met again in Austin Nov 23 to consider proposed legislation for the 1977 session of the Texas legislature.

The statutory deadline for the commission's report is Dec 1. Two TMA members, E. Don Webb, MD, of Houston, and Milton V. Davis, MD, of Dallas, are members of the 18-member panel.

1977 Continuing Education Directory to be mailed

The 1977 Texas Continuing Education Directory for Physicians, listing approximately 200 courses, will be mailed to members of the Texas Medical Association in late December.

The directory, the seventh to be published, also will contain information on more than 40 courses being presented during the Association's 1977 Annual Session in Houston, May 11-15. The first directory, printed in 1971, listed a total of 43 continuing education courses.

Also featured in the directory is a list of scientific meetings scheduled for 1977 in Texas.

The directory was compiled and prepared by the TEXAS MEDICINE staff as part of Texas Medical Association's continuing education services approved by the Committee on Continuing Education.

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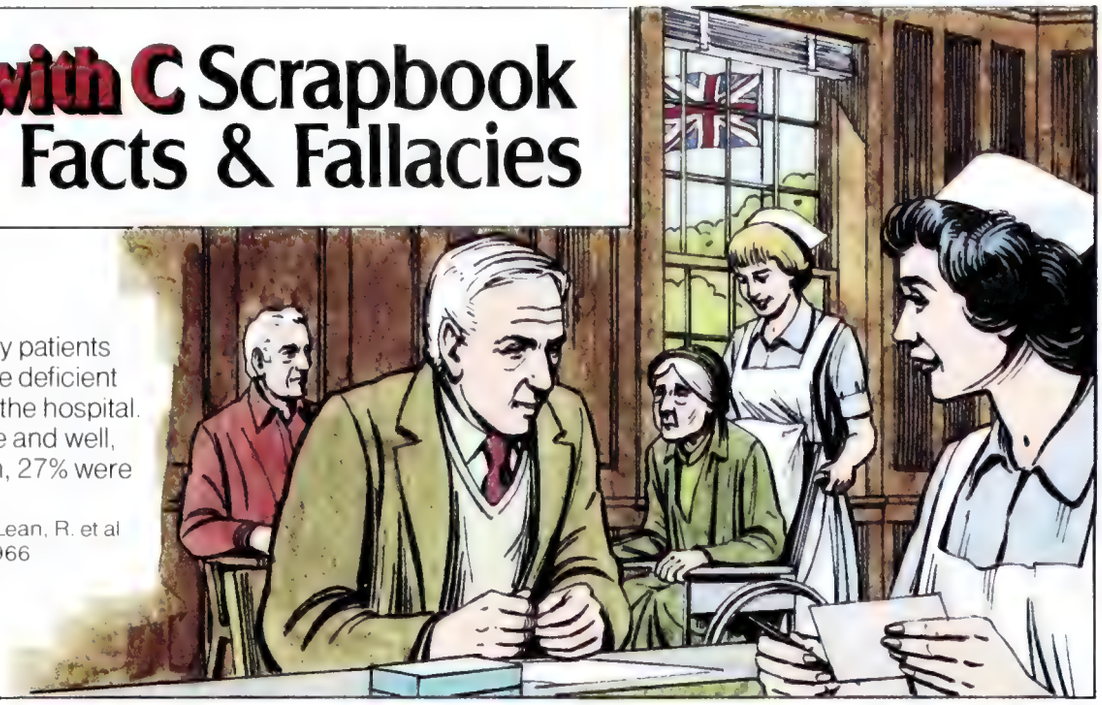

A study conducted among elderly patients in England showed that 41% were deficient in ascorbic acid on admission to the hospital. Even among those living at home and well, or not sufficiently ill for admission, 27% were deficient in ascorbic acid.

Griffiths, L.L., Brocklehurst, J.C., MacLean, R. et al *Diet in Old Age*, Brit. Med. J., 1:739, 1966

The loss of riboflavin in milk in a glass container exposed to sunlight for two hours may be as high as 95%.

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Hyoscyamine sulfate	0.1037 mg	0.1037 mg
Atropine sulfate	0.0194 mg	0.0194 mg
Hyoscine hydrobromide	0.0065 mg	0.0065 mg

Indications: Based on a review of this drug by the NAS/NRC and/or other information, FDA has classified the following indications as possibly effective: adjunctive therapy in the treatment of peptic ulcer; the treatment of the irritable bowel syndrome (irritable colon, spastic colon, mucous colitis) and acute enterocolitis. Final classification of the less-than-effective indications requires further investigation.

Brief summary. Contraindicated in patients with glaucoma, renal or hepatic disease, obstructive uropathy (for example, bladder neck obstruction due to prostatic hypertrophy) or a hypersensitivity to any of the ingredients. Blurred vision, dry mouth, difficult urination, and flushing or dryness of the skin may occur at higher dosage levels, rarely at the usual dosage..

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TWU withdraws medical school request

A proposal by Texas Woman's University to establish a School of Medicine with components in Fort Worth and the Rio Grande Valley was withdrawn at the Oct 15 meeting of the Coordinating Board, Texas College and University System.

The proposal was withdrawn at the request of TWU president Dr Mary Evelyn Huey.

TWU first submitted a request for a medical school to the Coordinating Board in Jan 1973.

TWU modified its original proposal in May 1973 to request designation by the Coordinating Board as the state-supported university to participate in the medical education provisions of the Veterans Administration Medical School Assistance and Health Manpower Training Act of 1972. Texas A&M University received that designation.

TWU requested Coordinating Board approval again in 1974 for a school of medicine. The Coordinating Board voted to deny the request at an Oct 1974 meeting.

At the Oct 15 meeting the Coordinating Board also approved amendments to the rules and regulations for the Hinson-Hazlewood College Student Loan Program pertaining to increased loan limits for medical, dental, and law students.

The newly-approved amendments specify that the maximum amount of the loan to any qualified applicant for an academic year is $1,500. However, qualified applicants enrolled in a professional school of medicine, dentistry, or law may borrow a maximum of $2,500 in a fiscal year. The amount of the loan shall not exceed the amount that the student needs to meet reasonable expenses as a student.

A student enrolled in a professional school of medicine, dentistry, or law may borrow up to an aggregate maximum of $10,000. That includes amounts borrowed at the undergraduate level.

William F. Ross, MD, Chairman of TMA's Council on Medical Education and Hospitals, also testified at the Oct 15 meeting about the need for expansion and funding of primary care residency programs in Texas.

The Coordinating Board will meet in a specially called meeting on the campus of Texas Woman's University in Denton at 10:30 am, Dec 3. Texas Woman's University did not resubmit the proposal for a medical school for the Dec 3 meeting.

More than 450 pass FLEX exam in June 1976

More than 450 medical school graduates passed the FLEX examination in June 1976, reports the Texas State Board of Medical Examiners.

Of the 529 who took the exam, 456 passed the exam.

Ten of the 360 Texas school graduates failed the test. Two of the 30 out of state graduates failed the exam.

Sixty-one of the 139 foreign medical graduates failed the test.

Executive Board will meet in December

TMA President L. S. Thompson, Jr, MD, the Executive Board, and Council chairmen will meet Dec 19 in Austin. The special meeting is to establish specific priorities for 1977, and to assign responsibility for implementation of those priorities.

Watch for your 1977 continuing education directory

Watch the December mail for your copy of the 1977 Texas Continuing Education Directory for Physicians and take advantage of the opportunity to plan ahead. The directory will be mailed to all members of the Texas Medical Association.

The seventh annual directory will include information on almost 200 continuing education courses specifically designed for physicians. These include more than 40 courses being offered during Texas Medical Association's Annual Session, May 11-15, 1977, in Houston. The directory also will feature a listing of scientific medical meetings scheduled during 1977. The first directory, printed in 1971, listed 43 continuing education courses.

The directory was compiled and prepared by the TEXAS MEDICINE staff as part of TMA's continuing education services approved by the Committee on Continuing Education. Additional copies will be available upon request from TEXAS MEDICINE, 1801 N. Lamar Blvd., Austin, Tex. 78701.

Approved health manpower bill will provide $2 billion for medical education

After three years, Congress has voted and President Gerald Ford has signed legislation that will provide more than $2 billion for medical education in the next three years.

Passage of the Health Professions Educational Assistance Act of 1976 ended debate about how many federal strings should be attached.

As a result of the legislation's passage, medical schools are assured of a continuation of capitation and construction funds, medical students will have increased opportunities for federal scholarships and loan assistance, and the government's National Health Service Corps stands as an expanding program to channel physicians into shortage areas. In addition, medical schools will be required to produce more primary care physicians.

As a condition for capitation aid, medical schools must have in 1978 at least 35 percent of their filled first-year positions in direct or affiliated residency training programs in primary care, defined as family medicine, general internal medicine, and general pediatrics.

Rather than requiring certain percentages of medical school graduates to enter shortage area service or join the National Health Service Corps (NHSC), the new medical education bill provides enough NHSC scholarship funds to assure sufficient numbers of young physicians entering the program.

For construction of ambulatory, primary care teaching facilities for physicians and dentists, the legislation authorizes $120 million for three years.

The capitation grant levels are set at $2,000 per student for the coming fiscal year, $2,050 for fiscal 1979, and $2,100 for the next year.

New restrictions are imposed on alien foreign medical graduates including a requirement they return to their country of origin after training.

U.S. citizen graduates of foreign medical schools will be given special consideration for acceptance by American medical schools. Medical board and English proficiency tests are specified for immigrating health professionals.

The Health, Education, and Welfare Department, under the bill, will prepare sweeping data on health professionals' location, training, etc., "for the purpose of establishing a uniform health professions data reporting systems."

The measure provides that new "unaffiliated" residency programs will not be eligible for federal grants and loans, but existing programs are given a "grandfather clause" exemption.

There is no language pertaining to federal relicensure for physicians.

Pharmacy leaders meet with TMA officers

Officers of the Texas Medical Association and the Texas Pharmaceutical Association met in September to discuss the professional liability insurance crisis in Texas.

Pharmacist representatives reported at the meeting that insurance underwriters are becoming increasingly reluctant to write professional liability coverage for pharmacists.

TMA officers participating included L.S. Thompson, Jr., MD, TMA president; Sheridan S. Evans, MD, TMA vice president; Val F. Borum, MD, member of TMA Council on Medical Legislation; and Milton V. Davis, MD, member of the Texas Medical Professional Liability Study Commission.

Representing the Texas Pharmaceutical Association were Lonnie J. Yarbrough, TPA president; Charles R. Atkinson, TPA president-elect; and T.L. Vordenbaumen, TPA vice president.

NEWS

House subcommittee recommends mandatory service for new doctors

Mandatory service for new doctors is just one of the recommendations included in the interim report of the Medical Education Subcommittee of the House Higher Education Committee.

Members of the Subcommittee which held two days of hearings in Austin in September are Rep Fred Head (D-Troup), Rep R. B. McAlister (D-Lubbock), and Rep Don Rains (D-San Marcos).

The Subcommittee proposed several short-term solutions to what it called the critical condition of the supply of doctors in small towns, rural areas, and underserved metropolitan areas.

One proposal would require the admission of at least 20 percent of each Texas medical school class on the condition that this 20 percent would practice in rural or underserved areas for at least four years following graduation and residency training.

Another proposal would require two-year practice in rural or underserved areas by each Texas medical school graduate following residency training.

A third proposal would require two-year practice anywhere in Texas by each Texas medical school graduate following residency.

"It gives the Subcommittee no pleasure to recommend these alternatives which are considered harsh and oppressive by many medical educators and practitioners. However, when we consider the fear and suffering faced by sick and injured Texans, both young and old alike, who cannot find a doctor to treat them, we are reassured that our recommendations are sound and justified even though they be a distinct departure from the practice of the past," the report stated.

Other Subcommittee proposals include 50 percent state funding of 150 new and additional family medicine residency programs in 1977 and 30 new and additional family medicine residency programs in 1978 to provide a residency program for each medical school graduate.

The Subcommittee also recommends appropriations of $78.5 million in the 1977 legislative session to increase medical school class size.

The report recommends new medical schools to be located at Fort Worth, Tyler, and in the Rio Grande Valley.

"It is apparent to even the most uninformed person that we do not have enough doctors to treat the sick in Texas in either our metropolitan or our rural areas. Anyone who doubts this should make his or her own independent effort to secure medical treatment and evaluate the results," the report concludes.

(See report of Coordinating Board on these issues, page 10.)

"Mommy, where do anovulatories come from?"

Hospital activities commission publishes new quality assurance manual

The Commission on Professional and Hospital Activities (CPHA) has published the second edition of *Quality Assurance in Long-Term Care Facilities: Planning Improved Patient Care Through Extended Stay Review, Discharge Planning and Medical Care Evaluation.*

Published first in 1975, the manual deals with the use of medical care evaluation studies as a means of planning improved patient care in long-term facilities.

The manual contains examples of completed medical care evaluation studies, suggested monitoring techniques, and various essential forms.

The book is $25 and can be ordered by contacting CPHA, Ann Arbor, Mich.

CPHA is a nonprofit research and education center dedicated to the improvement of hospital and medical care.

Speakers selected for Annual Session

Richard E. Palmer, MD, President of the AMA, and Rep Paul G. Rogers (D-Fla) will address luncheons during the 1977 Texas Medical Association Annual Session in Houston, May 12-15.

Dr Palmer will address the Delegates' Luncheon on May 12.

Rep Rogers will present the May 14 General Meeting luncheon address.

More than 30 guest speakers have been secured for the program. In conjunction with the meeting, 21 scientific sections, 32 related organization programs, ten special programs, and committee meetings will be scheduled.

Dr Palmer is a pathologist from Alexandria, Va. He served as Chairman of the Board of Trustees of the AMA from 1973-1975, and has served as a member of the AMA Council on Medical Service and its Committees on Health Care of the Poor and Government Medical Service.

Rep Rogers is now serving his sixth year as Chairman of the House Public Health and Environment Subcommittee. The Subcommittee has jurisdiction over Medicaid and legislation pertaining to the Food and Drug Administration, mental health, drug abuse, health manpower, and some national health legislation.

Laws which Rep Rogers has sponsored or played a major role in enacting include the Emergency Medical Services Act, the National Research Act, the Health Manpower Training Act, the National Cancer Act of 1971, The Special Action Office for Drug Abuse Prevention, the Health Maintenance Organization Act, and the Migrant Health Act.

Physicians' fees increase .8 percent in September

Physicians' fees rose .8 percent in September, according to the government's Consumer Price Index. The rise in fees, the largest since June, exceeded the increases in the all services index (.5 percent) and the all items index (.2 percent).

In July and August physicians' fees had increased .6 percent.

Hospital service charges rose .4 percent in September, compared to .9 in August. Both semi-private room charges and operating room charges rose .5 percent in September compared to 1.1 percent in August.

Part of the increase in physicians' fees is the result of the rising cost of professional liability insurance. In 1975, according to an AMA survey

NEWS

and data obtained from federal agencies, patients paid an estimated $1.24 for malpractice insurance, about 8.1 percent of the total cost of the visit, each time they saw a doctor.
In 1973 patients paid only 30 cents per visit for malpractice insurance, or about 2.4 percent of the full amount of the visit.
Physicians paid an average of $610 for malpractice insurance in 1968 and $1,905 in 1973, the AMA Survey revealed.
Since then, according to a government survey of the insurance industry, the premiums went up another 84 percent in 1974 and 125 percent in 1975. The average payment per physician in 1975 was $7,887, the AMA estimated.
Physicians' business expenses (including malpractice insurance), have been rising faster than increases in fees.
During the period 1966-74, physicians' business costs per patient rose at a rate of 8.3 percent per year, while fees, according to the Consumer Price Index, went up at an average annual rate of 6.2 percent.

JCAH will present programs on hospital accreditation standards

A program on hospital accreditation standards has been developed by the Joint Commission on Accreditation of Hospitals (JCAH).
The program will be held throughout the country and will provide practical instruction on revisions and additions to the JCAH's accreditation standards along with explanations of the standards contained in the Accreditation Manual for Hospitals.
The program also covers the interactions of the JCAH as a voluntary accreditation agency with the Department of Health, Education, and Welfare Validation Survey Program and professional standards review organizations.
The program, which is designed for hospital administrators, has been approved for 10½ Category I credits in the Physician's Recognition Award program and for nine credit hours for members of the American Record Association.
For more information on dates and locations, write the JCAH, 875 N Michigan Ave., Chicago, Ill. 60611.

Winter conference focuses on legislative issues

The 1977 Update on Legislative Issues will be the title for the Texas Medical Association's winter conference Jan 15, 1977, in Austin.
The conference will provide information on legislative issues of medical interest which will be introduced before the new Congress and the Texas legislature in 1977.
Congressional issues to be discussed include national health insurance, cost containment and cost control, and recent assaults on professionalism. At the state level, attention will be focused on bills which will be designed to ease or resolve the professional liability insurance crisis, increase medical manpower, and support more residencies in primary care fields of medicine.

HEW will study health care expenditures

A national study of health care expenditures will be conducted by the Department of Health, Education, and Welfare and will include a survey of at least 10,000 households and 100 communities.
A $6.4 million contract for the study was awarded to the Research Triangle Institute of North Carolina by the Health Resources Administration.
The study will cover utilization of health services as well as expenditures.

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NEWS

Media competition announced

The Texas Medical Association has announced its 20th annual Anson Jones Award competition for excellence in communicating health information to the public.

Open to Texas newspapers, magazines, and radio and television stations, the competition is divided into eight separate categories. Each winner receives a $250 cash award and an engraved plaque.

Winning entries are judged on the basis of accuracy, significance, quality, public interest, and impact. Professionals from the fields of publishing and broadcasting will review the entries with the final winners selected by a panel of physicians.

The entry deadline is Dec 10, 1976. Entries must have been published or broadcast between Dec 1, 1975 and Nov 30, 1976.

Award winners will be announced Feb 1, 1977. Presentations will be made during TMA's annual session in Houston in May 1977. The award is named in honor of Anson Jones, MD, a pioneer Texas physician, distinguished writer, and former president of the Republic of Texas.

He was responsible for the establishment of the first regulations concerning the practice of the healing arts in Texas. While serving as Secretary of State to the Republic, he urged the formation of an "Association of Physicians of the Republic of Texas for the promotion and general diffusion of medical knowledge."

Rural medical loans awarded

The State Rural Medical Education Board has awarded more than $123,100 to 29 medical students for fiscal years 1976 and 1977 as of Sept 10, 1976. The loans went to 21 freshmen, four sophomores, three juniors, and one senior student.

The rural medical education board, established by the legislature in 1973, is authorized to make loans to medical students with the stipulation that they will serve in rural areas upon completion of their training. The students will receive credit for one-fifth of the loan for each year of rural practice, thus the loan is retired in five years.

The goals of the program are to provide needy students assistance with the high cost of medical education and to provide a strong incentive for practicing in rural areas.

The students are not required to attend a Texas medical school, but practice must be in the state.

The board will be looking for a new budget appropriation when the Texas Legislature meets in 1977. The board is also authorized to receive donations to the loan fund from any group or individual.

INVESTMENT PERFORMANCE FOR TMA MEMBERS' RETIREMENT PLAN & TRUST

(As a service to participants in the TMA Members' Retirement Plan and to physicians interested in enrolling in the program, comparative performances for investments are listed. Figures shown are the latest available at press deadline and are for comparison purposes only. Most daily newspapers list up-to-the minute values on mutual funds.)

Investment Media*	1976 Through 10/31/76	3 Years Ended 12/31/75	5 Years Ended 12/31/75	Current Dividend Yield
Loomis-Sayles Capital Dev. Fund	+ 9.4%	−33.0%	− 6.2%	1.5%
Loomis-Sayles Mutual Fund	+ 7.3%	−21.0%	− 3.7%	3.2%
Mercantile Bank Equity Fund	+12.5%	−35.8%	−16.5%	3.6%
Mercantile Bank Fixed Income Fund	+ 6.7%	−13.5%	− 8.6%	7.6%
T Rowe Price Growth Stock Fund	+ 7.3%	−34.1%	− 1.9%	2.1%
T Rowe Price New Income Fund	+ 2.7%	N/A	N/A	7.9%
Stein Roe & Farnham Balanced Fund	+ 6.8%	−24.9%	+ 4.1%	3.1%
Standard & Poor 500 Stock Average	+14.1%	−30.9%	− 2.1%	
Dow Jones Industrial Average	+13.2%	−16.4%	+ 1.6%	

*Includes reinvested capital gains distributions.

CAPITAL COMMENTS

AUSTIN: PROFESSIONAL LIABILITY INSURANCE INCREASE. Effective Jan 1, 1977, the State Board of Insurance of Texas has approved a filing by the Medical Protective Company of Fort Wayne, Ind, to amend the increased limits factor applicable to professional liability insurance. The company is using the old Insurance Service Office (ISO) excess factors. After Jan 1, 1977, Medical Protective will use new ISO factors. The new factors will be applicable to all new and renewal policies on and after Jan 1, 1977. In the filing, Medical Protective indicated that the use of countrywide experience would indicate a 25.4 percent increase. The use of Texas experience using countrywide loss development factors indicates a 63.3 percent increase, and the use of Texas experience using the Texas loss development factors indicates a 60.3 percent increase. The new ISO factors will constitute an effective 16.7 percent increase on the average for physicians for this coverage.

WASHINGTON: MORE WOMEN ENTERING HEALTH PROFESSIONS. A report of the Department of Health, Education, and Welfare shows there are increasing numbers of women in health professions. The study, commissioned by the Women's Action Program in the Office of Planning and Evaluation, was conducted by a San Francisco Research Group, Urban and Rural System Associates. In the 1974-1975 academic year, the summary said, 22.2 percent of the first year medical school students were women. In osteopathy, women accounted for 10.9 percent of the places; in dentistry, 11.2 percent; in veterinary medicine, 24.4 percent; in optometry, 11.4 percent; in podiatry, 4 percent; in pharmacy, 27 percent; and in public health, 47 percent.

WASHINGTON: COLD REMEDIES SALES. Francis C. Lowell, MD, a Harvard allergy specialist who headed a panel on over-the-counter drugs, said there are between 35,000 and 50,000 cold remedies on the market with an annual sales volume of $735 million.

WASHINGTON: COST OF NATIONAL HEALTH INSURANCE. The Department of Health, Education and Welfare has issued a new report estimating the cost of various national health insurance bills that were introduced in the 94th Congress. Prepared for HEW by actuary Gordon Trapnell, the report estimates that the cost of the various proposals by 1980 would be: $233.5 billion for the Long-Ribikoff plan; $234.8 billion for the Nixon Administration's CHIP plan; $243.5 billion for the Health Insurance Association's plan; $243.8 billion for the AMA plan; $248.6 billion for the American Hospital Association's bill; and $248.3 billion for labor's health security proposal. With no NHI program, U.S. health expenditures would be $223.6 billion, the report estimates.

WASHINGTON: MEDICAL COST STUDY. A new government study forecasts medical expenditures in 1980 as $223.5 billion, an increase of $83 billion in four years. That is without national health insurance. A Columbia University study shows private hospitals and physicians already are operating largely on public funds without adequate control. In New York City, taxpayers are paying sixty percent of the health care bill, double the percent of ten years ago.

Editor's note: "Capital Comments" is prepared by Brown, Maroney, Rose, Baker & Barber, Attorneys at Law, TMA General Counsel, to highlight current items of interest relating to health matters in the US Congress, federal agencies, state legislature, and Texas administrative agencies.

WASHINGTON: CHIROPRACTORS SUE AMA. Five individual chiropractors, representing the profession, have filed a suit in the U.S. District Court, Chicago, charging the AMA, the American Hospital Association, the Joint Commission on Hospital Accreditation, ten other health groups, and a number of individuals with conspiracy to monopolize health care in the United States and unreasonable restraint of trade.

DALLAS: NATUROPATHIC PHYSICIANS FILE SUIT. The Texas Association of Naturopathic Physicians is one of several groups which says in a suit filed in Dallas that the constitutional right to practice naturopathy is being rejected. Other plaintiffs in the suit, filed in U.S. District Judge Robert Porter's court, include the National Association of Naturopathic Physicians, several other state naturopathic associations, and a number of naturopathic physicians, students, and patients. The suit is filed against the U.S. Food and Drug Administration, the U.S. Department of Health, Education and Welfare, Dallas County Commissioners, the State Board of Pharmacy, and the Texas State Board of Medical Examiners. The suit alleges that various state and federal laws and regulations restrict the practice of naturopathy, as it is defined by the plaintiffs. The suit defines naturopathy as the "art, science and philosophy of natural healing by application of the laws of nature to the human body for its care and to preserve disease by any means that will assist the self-healing processes of the body." The suit contends the defendant's laws and regulations also restrict the training and education of naturopathic students. It says naturopathic physicians are denied full use of government programs like Medicare, are restricted to access to hospitals, and are restricted by unconstitutional laws regarding prescriptions. The suit asked the court to declare all laws and regulations allegedly violating the constitutional rights of the plaintiffs to be void.

WASHINGTON: NEW MEDICARE HOSPITAL DEDUCTIBLE. Beginning in January, the Medicare hospital deductible will be $124. The present Part B hospital deductible is the first $104 of the patient's hospital bill. The new deductible for a beneficiary with a hospital stay of more than sixty days will be $31 daily for the first day through the 90th day, an increase over the present $26 daily. A beneficiary who wishes to draw on his life-time reserve of 60 days will pay $62 for each reserve day used, an increase of $10 from the present $52 daily charge. Post-hospital stays of more than 20 days in a skilled nursing facility will cost $15.50 daily from the 21st through the 100th day, an increase from the present $13 daily. Social Security officials say that about 24.7 million persons were covered by hospital insurance this year, a number that will increase to 25.3 million by next year.

MARYLAND: UNETHICAL ADVERTISING. One hundred and fifteen Prince George's County Maryland physicians have been reprimanded for allowing names and information about practices to appear in 1974 consumer directory compiled by Ralph Nader's health research group. The Maryland Commission on Medical Discipline, a state agency, ruled that while consumer directories are a good idea, any that rate physicians as did the health research group, smacks of indirect advertising and violates state law.

WASHINGTON: NATIONAL SURGICAL RULES THREAT. The AMA has informed Rep John Moss, (D-Calif), Chairman of the House Commerce Subcommittee on Oversight and Investigation, that—although the AMA supports elimination of unnecessary services in Medicare and Medicaid, it does not feel the federal government should establish criteria for determining what is necessary. In a letter to Rep Moss, James Sammons, MD, AMA executive vice president, said that a letter from the chairman appears to indicate that the subcommittee intends to establish such criteria. Elimination of unnecessary services is what professional standards review organizations are all about, Dr Sammons said. In cooperation with the Department of Health, Education, and Welfare, the AMA has helped in development of sample criteria that were published last July. "We see no reason to develop additional criteria. Local determination must be a keystone consideration as it is in the PSRO program," Dr Sammons said.

WASHINGTON: NEW APPROPRIATIONS VETO OVERRIDDEN. An appropriations bill for fiscal 1977 became law after Congress overrode the President's veto. In objecting to the bill, President Ford said, "My objection to this measure is based purely and simply on the issue of fiscal integrity." While voicing support for most of the programs funded in the bill, as well as the amendment which restricts the use of federal funds for abortion, the President said the $56.6 billion measure was an unwarranted spending increase and an example of a partisan political bill lacking fiscal restraint and responsibility. Included in the bill are the following appropriations: Health Service Administration (including maternal and child health, family planning, and home health services, Health Maintenance Organizations, and the National Health Service Corps), $1.016 billion; National Institutes of Health, $2.412 billion; alcohol-drug abuse and mental health, $824 million; Health Resources Administration, $394 million. The total health appropriation is $5.015 billion.

WASHINGTON: GOVERNORS OPPOSE HEALTH MANPOWER CREDENTIALING. The Southern Governor's Conference has adopted a resolution opposing the recent HEW report calling for the establishment of a national certification council for health care personnel and the development of national credentialing standards for the health care professions. The resolution, submitted by Gov Christopher S. Bond of Missouri, states, "Be it resolved, that the Southern Governor's Conference by this resolution hereby advises the Secretary, Department of Health, Education, and Welfare, and the Congress of its opposition to the recommendation presented in the proposal and to the methods and procedures it suggested to coerce their acceptance."

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CONTINUING EDUCATION COURSES

DECEMBER

Cardiovascular Disease

Title: 22nd Annual Cardiology Program: Selected Topics in Cardiology
Sponsor: UT Health Science Center at Houston, Division of Continuing Education
Location of Course: St Joseph Hospital Auditorium, Houston
Dates: Dec 7-9, 1976
Duration: Continuous, 2½ days, 18 total course hours
Designed For: General practitioners; Specialists; Elementary and advanced students of cardiology
Credit: 18 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Teaching Methods: Audiovisual materials, lecture
Contact: Office of the Director, Division of Continuing Education, UT Health Science Center at Houston, Box 20367, Houston 77025

Title: Coronary, Valvular and Myocardial Heart Diseases: Structure-Function Correlations
Sponsor: American College of Cardiology
Location of Course: Williamsburg, Va
Dates: Dec 7-10, 1976
Fee: Members, $150; Non-members, $200
Credit: 26 hours, Category I, AMA Physician's Recognition Award
Contact: Mary Anne McInerny, Director of Continuing Education Programs, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014

Title: Cardiology for the Clinician-1976: Facts, Fables and Fallacies
Sponsors: American College of Cardiology, New York Medical College
Location of Course: Americana Hotel, New York
Dates: Dec 10-12, 1976
Fee: Members, $140; Non-members, $175
Credit: 23 hours, Category I, AMA Physician's Recognition Award
Contact: Mary Anne McInerny, Director, Department of Continuing Education Programs, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014.

Gastroenterology

Title: Gastrointestinal Workshop for the Practicing Physician
Sponsor: University of Kentucky Medical Center
Location of Course: University of Kentucky Medical Center, Lexington
Dates: Dec 17-18, 1976
Fee: $80
Contact: Frank R Lemon, MD, Continuing Education, College of Medicine, University of Kentucky, Lexington, Ky 40506

Neurology

Title: Current Therapy of Common Neurological Disorders
Sponsors: Department of Neurology, UT Health Science Center at Dallas, Southwestern Medical School; A Webb Roberts Center for Continuing Education, Dallas
Location of Course: UT Health Science Center at Dallas
Dates: Dec 10-11, 1976
Credit: 12 hours, AAFP Prescribed; Category I, AMA Physician's Recognition Award
Contact: Office of Continuing Education, UT Health Science Center at Dallas, 5323 Harry Hines Blvd, Dallas 75235

Ophthalmology

Title: Hermann Hospital Ophthalmology Annual Alumni Meeting
Sponsors: UT Medical School at Houston, Department of Ophthalmology; Hermann Hospital, Houston
Location of Course: Holiday Inn, Medical Center, Houston
Date: Dec 11, 1976
Duration: 1 day, 8 hours instruction
Fee: $50
Designed For: Specialists in Ophthalmology
Teaching Methods: Audiovisual materials, lecture, open question
Contact: Richard S Ruiz, MD, Chairman, Department of Ophthalmology, UT Medical School at Houston, 1121 Hermann Professional Bldg, Houston 77025

Psychiatry

Title: Phenomenology and Treatment of Schizophrenia
Sponsor: Department of Psychiatry, Baylor College of Medicine, Houston
Dates: Dec 9-10, 1976
Duration: Continuous, 2 days
Contact: Office of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

Other

Title: Child Abuse and Protective Services Institute Series
Sponsors: State Bar of Texas, State Department of Public Welfare
Locations and Dates of Course: Odessa (Nov 4), El Paso (Nov 5), Dallas (Nov 18), Harlingen (Nov 18), Fort Worth (Nov 19), San Antonio (Nov 19)
Fee: Pre-registration, $30; Door registration, $35
Designed For: Department of Public Welfare staff workers; Juvenile, district,

domestic relations and other judges; County and district attorneys; Legal aid attorneys; School, hospital and police personnel
Contact: State Bar of Texas, Child Abuse Institute, Box 12487, Capitol Station, Austin 78711

Title: Health Planning and Primary Care Symposium
Sponsor: American Association for Comprehensive Health Planning
Location of Course: New Orleans
Dates: Dec 9-10, 1976
Fee: $150
Designed For: Planners, providers, consumers involved in primary care development and delivery
Enrollment: Maximum, 500
Contact: American Association for Comprehensive Health Planning, 801 N Fairfax St, Suite 212, Alexandria, Va 22314

JANUARY, 1977

Cardiovascular Disease

Title: Results and Evaluation of New Methodology in Cardiology
Sponsors: American College of Cardiology, Santa Barbara Heart and Lung Institute
Location of Course: Opticon Theater, Snowmass-at-Aspen, Aspen, Colo
Dates: Jan 10-14, 1977
Fee: Members, $125; Non-members, $175
Credit: 18 hours, Category I, AMA Physician's Recognition Award
Contact: Mary Anne McInerny, Director, Department of Continuing Education Programs, American College of Cardiology, 9650 Rockville Pike, Bethesda, Md 20014

Title: Ischemic Heart Disease, Problems and Perspectives
Sponsors: John A Burns School of Medicine, University of Hawaii; Council on Clinical Cardiology, American Heart Association
Location of Course: Royal Lahaina Hotel, Maui, Hawaii
Dates: Jan 17-20, 1977
Fee: $175
Credit: 13 hours, Category I, AMA Physician's Recognition Award
Contact: Hawaii Conference Services, Box 22670, Honolulu 96822

Chest Disease

Title: Current Topics in Respiratory Disease
Sponsor: New York University Post-Graduate Medical School
Location of Course: New York
Dates: Jan 20-22, 1977
Fee: $150; Reduced rates available
Designed For: Specialists in Internal Medicine, Family Practice
Credit: Category I, AMA Physician's Recognition Award
Contact: Office of the Assoc Dean, Registration Department, New York University Post-Graduate Medical School, 550 First Ave, New York 10016

Emergency Care

Title: Recent Advances in Care of the Acutely Injured
Sponsors: American College of Surgeons; Department of Surgery, Tulane Medical Center, New Orleans
Location of Course: Fairmont Hotel, New Orleans
Dates: Jan 24-26, 1977
Fee: Surgeons, $200; Residents, $100
Enrollment: Maximum, 200
Contact: American College of Surgeons, Trauma Division, 55 E Erie, Chicago 60611

Hematology

Title: Topics in Clinical Hematology: Disorders in Maturation
Sponsors: American College of Physicians, University of Florida School of Medicine, American Society of Hematology
Location of Course: Ponte Vedra Beach, Fla
Dates: Jan 10-13, 1977
Credit: 26 hours, Category I, AMA Physician's Recognition Award
Contact: Registrar, Postgraduate Courses, ACP, 4200 Pine St, Philadelphia 19104

Obstetrics & Gynecology

Title: Diseases of the Vulva and Vagina
Sponsor: Baylor College of Medicine
Location: Shamrock Hilton Hotel, Houston
Dates: Jan 13-15, 1977
Fee: $225
Contact: Division of Continuing Education, Baylor College of Medicine, Texas Medical Center, Houston 77030

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Professional Services Division
TEXAS BANK AND TRUST COMPANY
P. O. Box 101 Jacksonville, Texas 75766

for the inflamed phase of hemorrhoidal flare-up

ANUSOL-HC® SUPPOSITORIES
Rectal Suppositories with Hydrocortisone Acetate

ANUSOL-HC® CREAM
Rectal Cream with Hydrocortisone Acetate

CAUTION: Federal law prohibits dispensing Anusol-HC Suppositories and Anusol-HC Cream without prescription.

Description: Each Anusol-HC Suppository contains hydrocortisone acetate, 10.0 mg; bismuth subgallate, 2.25%; bismuth resorcin compound, 1.75%; benzyl benzoate, 1.2%; Peruvian Balsam, 1.8%; zinc oxide, 11.0%; also contains the following inactive ingredients: bismuth subiodide, calcium phosphate, and coloring in a bland hydrogenated oil-cocoa butter base.

Each gram of Anusol-HC Cream contains hydrocortisone acetate, 5.0 mg; bismuth subgallate, 22.5 mg; bismuth resorcin compound, 17.5 mg; benzyl benzoate, 12.0 mg; Peruvian Balsam, 18.0 mg; zinc oxide, 110.0 mg, also contains the following inactive ingredients: propylene glycol, bismuth subiodide, propylparaben, methylparaben, polysorbate 60, sorbitan monostearate in a water-miscible base of mineral oil and glyceryl monostearate. Non-staining.

Indications: Anusol-HC is adjunctive therapy for the symptomatic relief of pain and discomfort in: external and internal hemorrhoids, proctitis, papillitis, cryptitis and fissures, incomplete fistulas, and relief of local pain following anorectal surgery.

Anusol-HC is especially indicated when inflammation is present. When acute symptoms subside, most patients can be maintained on regular Anusol® Suppositories or Ointment.

Contraindications: History of sensitivity to any component. Topical corticosteroids should not be employed in tuberculous, fungal and most viral lesions of the skin (including herpes, vaccinia and varicella).

Warnings: The safe use of topical steroids during pregnancy has not been fully established. Therefore, during pregnancy they should not be used unnecessarily on extended areas, in large amounts or for prolonged periods of time.

Precautions: Symptomatic relief should not delay definitive diagnoses or treatment. When there is bacterial skin infection, topical corticosteroids should be used only with appropriate concomitant antimicrobial therapy. Prolonged or excessive use of corticosteroids might produce systemic effects.

Dosage and Administration: Anusol-HC Suppositories: Remove foil wrapper and insert into the anus. One suppository in the morning and one at bedtime, for 3 to 6 days or until inflammation subsides. Then maintain patient comfort with regular Anusol.

Anusol-HC Cream: Adults—Remove tube cap and attach the plastic applicator. After gentle bathing and drying of the area, apply to the exterior surface and gently rub in. For internal use, insert the applicator by applying gentle, continuous pressure. Then squeeze tube to deliver medication. Cream should be applied 3 or 4 times a day for 3 to 6 days or until inflammation subsides. Then maintain patient comfort with regular Anusol.

Supplied: Anusol-HC Suppositories—boxes of 12 (N 0047-0089-12) suppositories in silver foil strips with (WC) printed in black.

Anusol-HC Cream—one-ounce tube (N 0047-0090-01) with plastic applicator; detachable label.

Full information is available on request.

Warner/Chilcott
Division,
Warner-Lambert Company,
Morris Plains,
New Jersey 07950

AN-GP-51-4C

THE PROFESSIONAL SOURCE OF

COMFORT

FOR INTERNAL & EXTERNAL ANORECTAL CONDITIONS

Anusol-HC®

suppositories and cream
with hydrocortisone acetate. Rx only

pain and burning
respond in minutes

- without belladonna alkaloids
- without CNS stimulants

Artist's interpretation in bas-relief of external hemorrhoids, postoperative anorectal wounds and anal dermatitis.

Famous Fighters

NEOSPORIN® Ointment
(polymyxin B-bacitracin-neomycin)
is a famous fighter, too.

Provides overlapping, broad-spectrum antibacterial action to help combat infection caused by common susceptible pathogens (including staph and strep).

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs in tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

INDICATIONS: Therapeutically (as an adjunct to systemic therapy when indicated) for topical infections, primary or secondary, due to susceptible organisms, as in: • infected burns, skin grafts, surgical incisions, otitis externa • primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) • traumatic lesions, inflamed or suppurating as a result of bacterial infection.

Prophylactically, the ointment may be used to prevent bacterial contamination in burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts and wounds accidentally incurred, its use may prevent the development of infection and permit wound healing. **CONTRAINDICATIONS:** Not for use in the eyes or external ear canal if the eardrum is perforated. This product is contraindicated in those individuals who have shown hypersensitivity to any of the components. **WARNING:** Because of the potential hazard of nephrotoxicity and ototoxicity due to neomycin, care should be exercised when using this product in treating extensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended. **PRECAUTIONS:** As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs. **ADVERSE REACTIONS:** Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
North Carolina 27709

COMING MEETINGS

AMERICAN MEDICAL ASSOCIATION

The American Medical Association's 30th Clinical Convention in Philadelphia, Dec. 4-7, 1976 will offer more than 100 continuing medical education events. The schedule includes approximately 45 postgraduate courses and nine general sessions which qualify for Category I credit toward the AMA Physician's Recognition Award. Also on the scientific program are 16 luncheons, 32 "Meet the Professor" sessions, telecourses, living teaching demonstrations and conducted exhibit rounds. AMA members and their guests pay no general registration fee; nonmember physicians pay $35, and their guests, $10 each. Fees for postgraduate courses vary.

Contact: AMA Department of Meeting Services, 535 N Dearborn St, Chicago 60610

CONFERENCE ON RURAL HEALTH IN SOUTH TEXAS

The Children's Heart Program of South Texas will present a Conference on Rural Health in South Texas, Dec 9-10, 1976 at the Emerald Beach Holiday Inn in Corpus Christi, Tex. The objectives of the conference are (1) to increase awareness of rural health problems, especially within South Texas, (2) to provide information on successful and innovative approaches to solving rural health problems in Texas and (3) to bring together individuals interested in rural health in South Texas. Panel discussions and presentations will focus on defining the health needs of South Texas, migrant health, folk medicine and other related topics.

Contact: The Children's Heart Program of South Texas, Driscoll Foundation Children's Hospital, Box 6530, Corpus Christi, Tex 78411

TEXAS ACADEMY CHAPTER, AMERICAN COLLEGE OF PHYSICIANS

The annual joint meeting of the Texas Academy of Internal Medicine, American College of Physicians and Texas Society of Internal Medicine will take place Dec 2-4, 1976 at the Houston Oaks Hotel. Physicians who attend the meeting are eligible for Category I credit toward the AMA Physician's Recognition Award.

Contact: Robert D Bone, MD, Box 841, Corsicana, Tex 75110

CURRENT NATIONAL MEETINGS

AMERICAN ACADEMY OF DERMATOLOGY, 35th Annual Meeting, Palmer House, Chicago, Dec 4-9, 1976. New feature: forum for presentation of new investigations, recent advances titled What's New in Clinical Research. Forum to be held Dec 7. Presentation time limited to 12 minutes, three minutes allowed for discussion. Contact: 820 Davis St, Evanston, Ill 60201.

AMERICAN ACADEMY OF PSYCHOANALYSIS, 20th Winter Meeting, Omni International Hotel, Atlanta, Dec 3-5, 1976. Dr Alberta Szalita, training analyst, Columbia University Psychoanalytic Clinic, to keynote plenary session Dec 3. Her topic will be impact of psychoanalysis on the family. Dr Don Bloch, director of Family Institute of New York, to do live family interview at Dec 4 plenary session. Dr Hans Strupp, professor of psychotherapy, Vanderbilt University, to speak on the problem of negative effects of psychotherapy. Other program participants: Dr Milton Berger, chairman, APA Video Task Force; Dr Salvador Minuchin, director, Philadelphia Family Therapy Training Center; Dr Carl Whitaker, professor of psychiatry, University of Wisconsin; Dr David Schecter, former director of training, William Alanson White Psychoanalytic Institute, New York; Dr O Spurgeon English, professor of psychiatry, Temple University; Dr Ian Alger, director of programs, American Academy of Psychoanalysis. Contact: 40 Gramercy Park N, New York 10010.

INTERNATIONAL COLLEGE OF SURGEONS, Annual Meeting, Caesar's Palace, Las Vegas, Nev, Dec 10-15, 1976. Postgraduate courses on malignant lymphomas, head and neck surgery, eye surgery, hand surgery, gynecology and urology, pacemakers, endoscopy. Registration fees: ICS member, $50; non-member, $100; continuing medical education courses, $60 each. Contact: 1516 Lake Shore Dr, Chicago 60610.

For other courses and symposiums, see Continuing Education Courses, pp 32-33.

DECEMBER

AMERICAN ACADEMY OF DERMATOLOGY, Chicago, Dec 4-9, 1976. 820 Davis St, Evanston, Ill 60201.

AMERICAN ACADEMY OF PSYCHOANALYSIS, Atlanta, Dec 5-8, 1976. Charlotte Bruskin, Exec Sec, 40 Gramercy Park N, New York 10010.

AMERICAN MEDICAL ASSOCIATION, Philadelphia, Dec 4-8, 1976. 535 N Dearborn St, Chicago 60610.

AMERICAN SOCIETY OF HEMATOLOGY, Boston, Dec 3-5, 1976. Thomas Bradley, MD, Sec, Veterans Administration Hospital, 4150 Clement St, San Francisco 94121.

■ THE CHILDREN'S HEART PROGRAM OF SOUTH TEXAS, DRISCOLL FOUNDATION CHILDREN'S HOSPITAL, Conference on Rural Health in South Texas, Corpus Christi, Dec 9-10, 1976. Box 6530, Corpus Christi 78411.

INTERNATIONAL COLLEGE OF SURGEONS, Las Vegas, Nev, Dec 12-16, 1976. 1516 N Lake Shore Dr, Chicago 60610.

■ SOUTHWESTERN GYNECOLOGIC ASSEMBLY, Dallas, Dec 2-4, 1976. Reuben H Adams, MD, Pres, 3630 Noble Ave, Dallas 75204.

■ TEXAS ACADEMY CHAPTER, AMERICAN COLLEGE OF PHYSICIANS, Houston, Dec 2-3, 1976. RD Bone, MD, Sec, Box 841, Corsicana, Tex 75110.

JANUARY, 1977

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Vail, Colo, Jan 6-8, 1977. 2650 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN HEART ASSOCIATION, ARIZONA AFFILIATE, Scottsdale, Ariz, Jan 21-22, 1977. 1445 E Thomas Rd, Phoenix, Ariz 85014.

AMERICAN SOCIETY OF CONTEMPORARY MEDICINE AND SURGERY, Hollywood, Fla, Jan 30-Feb 5, 1977. Virginia Kendall, Sec, 30 N Michigan Ave, Chicago 60602.

AMERICAN SOCIETY OF CONTEMPORARY OPHTHALMOLOGY, Hollywood, Fla, Jan 30-Feb 5, 1977. John Bellows, MD, Dir, 6 N Michigan Ave, Suite 1110, Chicago 60602.

■ TEXAS MEDICAL ASSOCIATION, Winter Conference, Austin, Jan 14-16, 1977. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

US VIRGIN ISLANDS MEDICAL SOCIETY, St Croix, VI, Jan 13-15, 1977. James S Glenn, MD, Chairman, US Virgin Islands Medical Society, Box 520, Christiansted, St Croix, US Virgin Islands 00820.

FEBRUARY, 1977

AMERICAN ACADEMY OF ORTHOPAEDIC SURGEONS, Las Vegas, Nev, Feb 3-8, 1977. Charles V Heck-MD, Exec Dir, 430 N Michigan Ave, Chicago 60611.

AMERICAN COLLEGE OF CARDIOLOGY, Philadelphia, Feb 28-Mar 3, 1977. William D Nelligan, 9650 Rockville Pike, Bethesda, Md 20014.

AMERICAN COLLEGE OF NUCLEAR PHYSICIANS, New Orleans, Feb 9-13, 1977. K Nicolas, 1730 Pennsylvania Ave NW, Suite 1150, Washington, DC 20006.

AMERICAN COLLEGE OF PSYCHIATRISTS, Atlanta, Feb 2-6, 1977. JC Nemiah, MD, Beth Israel Hospital, 330 Brookline Ave, Boston 02215.

AMERICAN COUNCIL OF MEDICAL STAFFS, Washington, DC, February, 1977. JL Garcia-Oller, MD, 3422 Bienville St, New Orleans 70119.

AMERICAN SOCIETY OF ABDOMINAL SURGEONS, New Orleans, Feb 6-9, 1977. BF Alfano, MD, Exec Sec, 675 Main St, Melrose, Mass 02176.

AMERICAN SOCIETY FOR SURGERY OF THE HAND, Las Vegas, Nev, Feb 1-3, 1977. JA Boswick, Jr, MD, Sec, University of Colorado Medical Center, 4200 E 9th Ave, Denver 80220.

ASPEN RADIOLOGY CONFERENCE, Aspen, Colo, Feb 28-Mar 4, 1977. Emanuel Salzman, MD, Conference Chairman, Division of Radiology, Beth Israel Hospital, Denver 80204.

■ FIRST DISTRICT MEDICAL SOCIETY, Pecos, Tex, Feb 7, 1977. LN Nickey, MD, 1515 N Oregon St, El Paso, Tex 79902.

INTERNATIONAL ACADEMY OF PROCTOLOGY, Kuala Lumpur, Singapore, Bali, Hong Kong and Taipei, Feb 17-Mar 7, 1977. Alfred J Cantor, MD, 96 Wildwood Rd, Great Neck, NY 11024.

TAOS MEDICAL SYMPOSIUM, Taos, NM, Feb 16-19, 1977. Thomas A Bodnar, Exec Dir, Albuquerque & Bernalillo County Medical Association, 2650 Yale Blvd SE #103, Albuquerque, NM 87106.

■ TEXAS PUBLIC HEALTH ASSOCIATION, Corpus Christi, Feb 27-Mar 2, 1977. Robert E Monroe, Exec Sec, 4107 Medical Parkway #201, Austin 78756.

MARCH, 1977

AMERICAN ACADEMY OF ALLERGY, New York, Mar 26-31, 1977. DL McNeil, Exec Dir, 225 E Michigan St, Milwaukee 53202.

AMERICAN ACADEMY OF FAMILY PHYSICIANS, NEW MEXICO CHAPTER, Durango, Colo, Mar 18-19, 1977. 2650 Yale Blvd, SE, Suite 105, Albuquerque, NM 87106.

AMERICAN COLLEGE OF SURGEONS, Los Angeles, Mar 28-31, 1977. CR Hanlon, MD, Dir, 55 E Erie St, Chicago 60611.

AMERICAN MEDICAL ASSOCIATION NATIONAL CONFERENCE ON RURAL HEALTH, Seattle, Mar 30-Apr 1, 1977. AMA Department of Rural and Community Health, 535 N Dearborn St, Chicago 60610.

AMERICAN MEDICAL STUDENT ASSOCIATION, Chicago, Mar 30-Apr 3, 1977. LR Giancola, Exec Dir, 1171 Tower Rd, Schaumburg, Ill 60195.

■ TEXAS ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS, Houston, Mar 4-5, 1977. Iris Wenzel, 1801 N Lamar, Austin 78701.

NEW ORLEANS GRADUATE MEDICAL ASSEMBLY, New Orleans, Mar 28-31, 1977. 1430 Tulane Ave, New Orleans 70112.

■ SOCIETY OF NUCLEAR MEDICINE, SOUTHWEST CHAPTER, El Paso, Mar 18-20, 1977. RJ Gorten, MD, 915 Strand, Galveston, Tex 77550.

SOUTH CENTRAL ASSOCIATION OF BLOOD BANKS, Little Rock, Ark, Mar 16-18, 1977. Exec Sec, 4300 N Lamar Blvd, Austin, Tex 78756.

■ ST LUKE'S EPISCOPAL HOSPITAL/BAYLOR COLLEGE OF MEDICINE, 13th Annual Orthopedic Symposium, Houston, Apr 1-2, 1977. Alexander E Brodsky, MD, 505 Medical Towers Bldg, Houston 77025.

■ TEXAS RADIOLOGICAL SOCIETY, Dallas, Mar 17-19, 1977. Iris Wenzel, 1801 N Lamar, Austin, Tex 78701.

■ UT SYSTEM MD ANDERSON HOSPITAL AND TUMOR INSTITUTE, Symposium on Fundamental Cancer Research, Houston, Mar 2-4, 1977. Stephen C Stuyck, MD, MD Anderson Hospital and Tumor Institute, Houston 77030.

APRIL, 1977

AMERICAN ACADEMY OF NEUROLOGY, Atlanta, Apr 25-30, 1977. Stanley A Nelson, Exec Dir, 4015 W 65th, Suite 302A, Minneapolis 55435.

AMERICAN ASSOCIATION FOR THORACIC SURGERY, Toronto, Apr 18-20, 1977. WT Maloney, 6 Beacon St, Suite 620, Boston 02108.

AMERICAN COLLEGE HEALTH ASSOCIATION, Philadelphia, Apr 19-22, 1977. James W Dilley, Exec Dir, 2807 Central, Evanston, Ill 60201.

■ AMERICAN COLLEGE OF PHYSICIANS, Dallas, Apr 18-21, 1977. EC Rosenow, Exec Vice-pres, 4200 Pine St, Philadelphia 19104.

■ AMERICAN COLLEGE OF RADIOLOGY, Houston, Apr 17-22, 1977. WC Stronach, Exec Dir, 20 N Wacker Dr, Chicago 60606.

AMERICAN GERIATRICS SOCIETY, San Francisco, Apr 13-14, 1977. 10 Columbus Circle, New York 10019.

AMERICAN OCCUPATIONAL MEDICAL ASSOCIATION, Boston, Apr 24-28, 1977. Howard N Schulz, Exec Dir, 150 N Wacker Dr, Chicago 60606.

AMERICAN PEDIATRIC SOCIETY, San Francisco, Apr 25-29, 1977. David Goldring, MD, Sec, 500 S Kingshighway, St Louis 63110.

AMERICAN UROLOGICAL ASSOCIATION, INC, Chicago, Apr 24-28, 1977. Richard J Hannigan, Exec Officer, 1120 N Charles St, Baltimore 21201.

ARKANSAS MEDICAL SOCIETY, Little Rock, Apr 24-27, 1977. CC Long, MD, Exec Vice-pres, 214 N 12th, Box 1208, Fort Smith, Ark 72901.

ARIZONA MEDICAL ASSOCIATION, Phoenix, Ariz, Apr 26-30, 1977. BE Robinson, Exec Dir, 810 W Bethany Home Rd, Phoenix, Ariz 85013.

ASSOCIATION FOR RESEARCH IN VISION AND OPHTHALMOLOGY, Sarasota, Fla, Apr 25-29, 1977. RD Reinecke, MD, Sec-Treas, Albany Medical College, Albany, NY 12208.

NEW YORK ROENTGEN SOCIETY, New York, Apr 28-30, 1977. TC Beneventano, MD, Sec-Treas, Montefiore Hospital and Medical Center, 111 E 210th St, Bronx, NY 10467.

NORTH AMERICAN CLINICAL DERMATOLOGIC SOCIETY, Monterey, Calif, Apr 17-24, 1977. EF Finnerty, MD, Sec Gen, 510 Commonwealth Ave, Boston 02215.

PAN-PACIFIC SURGICAL ASSOCIATION, Honolulu, Apr 3-9, 1977. John R Watson, MD, 236 Alexander Young Bldg, Honolulu 96813.

SOCIETY OF TEACHERS OF FAMILY MEDICINE, New Orleans, Apr 17-20, 1977. Ms PL Plhal', Exec Dir, 1740 W 92nd St, Kansas City, Mo 64114.

SOUTHEASTERN SURGICAL CONGRESS, Bal Harbour, Fla, Apr 3-7, 1977. AH Letton, MD, Sec-Dir, 315 Boulevard NE, Suite 500, Atlanta 30312.

■ SOUTHWEST ALLERGY FORUM, Lakeway Inn, Austin, Apr 30-May 4, 1977. Theo S Painter, Jr, MD, Suite 107, Medical Park Tower, Austin, Tex 78705.

SOUTHWESTERN SURGICAL CONGRESS, Acapulco, Mexico, Apr 25-28, 1977. Jack A Barney, MD, Sec-Treas, 708 Physicians & Surgeons Bldg, Oklahoma City 73103.

MAY, 1977

AMERICAN COLLEGE OF EMERGENCY PHYSICIANS, Indiana Chapter, Indianapolis, May 11-14, 1977. David Gettle, MD, 10005 Hillsdale, Carmel, Ind 46032.

■ TEXAS MEDICAL ASSOCIATION, Annual Session, Houston, May 11-15, 1976. C Lincoln Williston, Exec Dir, 1801 N Lamar Blvd, Austin, Tex 78701.

AMERICAN ACADEMY OF FACIAL PLASTIC AND RECONSTRUCTIVE SURGERY, Boston, May, 1977. ME Tardy, MD, 2800 Lake Shore, Chicago 60657.

AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS , Chicago, May 9-12, 1977. Warren H Pearse, MD, One E Wacker Dr, Suite 2700, Chicago 60601.

■ AMERICAN PHYSICAL THERAPY ASSOCIATION, TEXAS CHAPTER, San Antonio, May 19-22, 1977. Geraldine Midgley, Box 1287, Uvalde, Tex 78801.

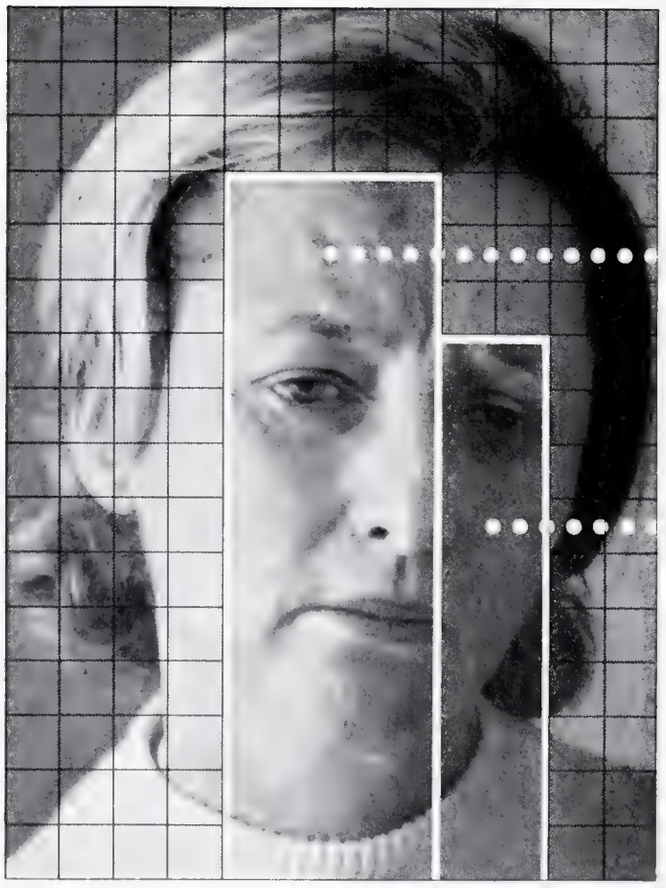
AMERICAN THORACIC SOCIETY OF THE AMERICAN LUNG ASSOCIATION, San Francisco, May 15-18, 1977. Robert G Weymueller, Exec Dir, 1740 Broadway, New York 10019.

DIGESTIVE DISEASE WEEK, Toronto, May 21-26, 1977, Charles B Slack, 6900 Grove Rd, Thorofare, NJ 08086.

■ TEXAS AIR-MEDICS ASSOCIATION, Houston, May 12, 1977. CF Miller, MD, Box 1338, Waco, Tex 76703.

■ TEXAS OCCUPATIONAL MEDICAL ASSOCIATION, Houston, May 12, 1977. Frank J Kelly, MD, Box 647, Amarillo, Tex 79604.

Both often



Before prescribing, please consult complete product information, a summary of which follows:

Indications: Tension and anxiety states; somatic complaints which are concomitants of emotional factors; psychoneurotic states manifested by tension, anxiety, apprehension, fatigue, depressive symptoms or agitation; symptomatic relief of acute agitation, tremor, delirium tremens and hallucinosis due to acute alcohol withdrawal; adjunctively in skeletal muscle spasm due to reflex spasm to local pathology; spasticity caused by upper motor neuron disorders; athetosis; stiff-man syndrome; convulsive disorders (not for sole therapy).

Contraindicated: Known hypersensitivity to the drug. Children under 6 months of age. Acute narrow angle glaucoma; may be used in patients with open angle glaucoma who are receiving appropriate therapy.

Warnings: Not of value in psychotic patients. Caution against hazardous occupations requiring complete mental alertness. When used adjunctively in convulsive disorders, possibility of increase in frequency and/or severity of grand mal seizure require increased dosage of standar convulsant medication; abrupt witho may be associated with temporary i crease in frequency and/or severity seizures. Advise against simultaneo gestion of alcohol and other CNS de sants. Withdrawal symptoms (simila those with barbiturates and alcohol) occurred following abrupt discontin (convulsions, tremor, abdominal an cle cramps, vomiting and sweating) addiction-prone individuals under c

respond to one

According to her major
ptoms, she is a psychoneu-
c patient with severe
iety. But according to the
ription she gives of her
ings, part of the problem
sound like depression.
s is because her problem,
ough primarily one of ex-
ive anxiety, is often accom-
ied by depressive symptom-
ogy. Valium (diazepam)
provide relief for both—as
excessive anxiety is re-
ed, the depressive symp-
s associated with it are also
n relieved.

There are other advan-
s in using Valium for the
nagement of psychoneu-
c anxiety with secondary
ressive symptoms: the
chotherapeutic effect of
ium is pronounced and
d. This means that im-
vement is usually apparent
in the patient within a few days rather than in a week or two, although it may take longer in some patients. In addition, Valium (diazepam) is generally well tolerated; as with most CNS-acting agents, caution patients against hazardous occupations requiring complete mental alertness.

Also, because the psychoneurotic patient's symptoms are often intensified at bedtime, Valium can offer an additional benefit. An *h.s.* dose added to the *b.i.d.* or *t.i.d.* treatment regimen can relieve the excessive anxiety and associated depressive symptoms and thus encourage a more restful night's sleep.

Valium®(diazepam) IV

2-mg, 5-mg, 10-mg scored tablets

in psychoneurotic
anxiety states
with associated
depressive symptoms

eillance because of their predisposi-
to habituation and dependence.

***Usage in Pregnancy:* Use of minor ranquilizers during first trimester should almost always be avoided because of increased risk of congenital malformations as suggested n several studies. Consider possibility of pregnancy when instituting therapy; advise patients to discuss therapy if they intend to or do become pregnant.**

cautions: If combined with other psytropics or anticonvulsants, consider efully pharmacology of agents employed; drugs such as phenothiazines, narcotics, barbiturates, MAO inhibitors and other antidepressants may potentiate its action. Usual precautions indicated in patients severely depressed, or with latent depression, or with suicidal tendencies. Observe usual precautions in impaired renal or hepatic function. Limit dosage to smallest effective amount in elderly and debilitated to preclude ataxia or oversedation.

Side Effects: Drowsiness, confusion, diplopia, hypotension, changes in libido, nausea, fatigue, depression, dysarthria, jaundice, skin rash, ataxia, constipation, headache, incontinence, changes in salivation, slurred speech, tremor, vertigo, urinary retention, blurred vision. Paradoxical reactions such as acute hyperexcited states, anxiety, hallucinations, increased muscle spasticity, insomnia, rage, sleep disturbances, stimulation have been reported; should these occur, discontinue drug. Isolated reports of neutropenia, jaundice; periodic blood counts and liver function tests advisable during long-term therapy.

ROCHE

Roche Laboratories
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

Information for authors

Texas Medicine is a scientific, clinical journal published primarily for members of the Texas Medical Association. In addition, it informs members—through editorials, news pages, and regular departments—about medical events, legislative and governmental news, coming meetings, continuing education courses, and programs and policies of the Association.

Material for *Texas Medicine* may be sent to the Managing Editor, 1801 North Lamar Blvd., Austin 78701. It must be offered solely to this journal. Each article is reviewed by a consultant specialist and an editorial board, and is accepted or rejected on the basis of its individual merit and the availability of other material. Reviews usually take six to eight weeks.

Scientific Articles

Manuscripts should be typed double-spaced with ample margins on firm paper. Two copies should be submitted and the author should keep a copy.

Titles should include the words most suitable for indexing the article in "Index Medicus," should stress the main point, and should be brief. Subtitles should not be connected grammatically with the main title.

Authors' names and degrees should follow the title, and their mailing addresses should be listed at the end of the article.

An introductory summary of 50-75 words is required.

Text should be narrative with complete sentences, few abbreviations, and logical subheadings. For spelling and usage the editors follow "Dorland's Illustrated Medical Dictionary," 25th edition, and "Webster's Third New International Dictionary, Unabridged."

References

Reference lists should contain in this order (1) author's last name, initials, (2) title of article or book, (3) name of journal, (4) volume and inclusive page numbers, written 33:156-160, (5) year. For books, the title should be followed by place of publication, name of publisher, and year.

Illustrative Material

Illustrations should be black and white drawings or positive photographs, with neat, uniform, fairly large lettering. A label pasted to the back of each illustration should indicate its number, topic, author's name, and title of article in brief.

Legends should be in complete sentences, numbered, and typed on a separate sheet.

A few color illustrations are authorized.

Tables should be typed on separate sheets. Column headings should show points of similarity; side headings, points of difference.

Previously Published Material

Written permission should be obtained from the publishers and the authors for use of any previously published material (extensive textual matter, illustrations, tables) used. Short verbatim quotations in the text may be used without permission, but should be quoted exactly with the source credited. Copies of permission letters should be submitted with the manuscript.

Editorials

Editorials should be prepared in the same general manner, and should be written in clear, concise language. Length should be about two or three pages typed with double spacing.

Letters

Letters will be published at the discretion of the Managing Editor and consultants.

News

News items should be sent to the Editorial Offices, 1801 North Lamar Blvd., Austin 78701.

Continuing Education, Meetings

Continuing education courses and medical meetings are listed in each issue. Information about courses should include title, sponsor, location, dates, duration, fee, how many may enroll, for whom the course is designed, teaching methods, type and number of hours credit, and name and mailing address of a person to contact.

Information about meetings should include the name of the organization, place and inclusive dates, and name and mailing address of a person to contact. Program topics and names of speakers may be included as space permits.

Material should be submitted in writing six weeks before publication; for example, information for the June issue (published June 1) is needed by April 15.

Obituaries

Obituaries of deceased TMA members are published if adequate information is received within four months of date of death. When notifying the editors of a member's death, please give the name and address of next of kin.

Policy on Columns

Few contributors recognize beforehand the demands of producing a monthly column that will consistently be of interest and value to the reader. Although a few regular columns appear, it has not been the policy to grant monthly pages to specific committees, councils, or groups.

The Scientific Publication Committee and the editors do, however, encourage committees, councils, and individuals to submit original material which they consider valuable to readers. Should regular publication in column form be deemed appropriate, the Committee and the editors will consider development of a column.

Editing

All material is subject to editing, but authors receive typescripts to check before publication. After the article is sent to the printer, only minimal revision may be made.

Reprints

Reprints are available directly from the printer at an established schedule of costs. Authors automatically receive order blanks when their articles are published.

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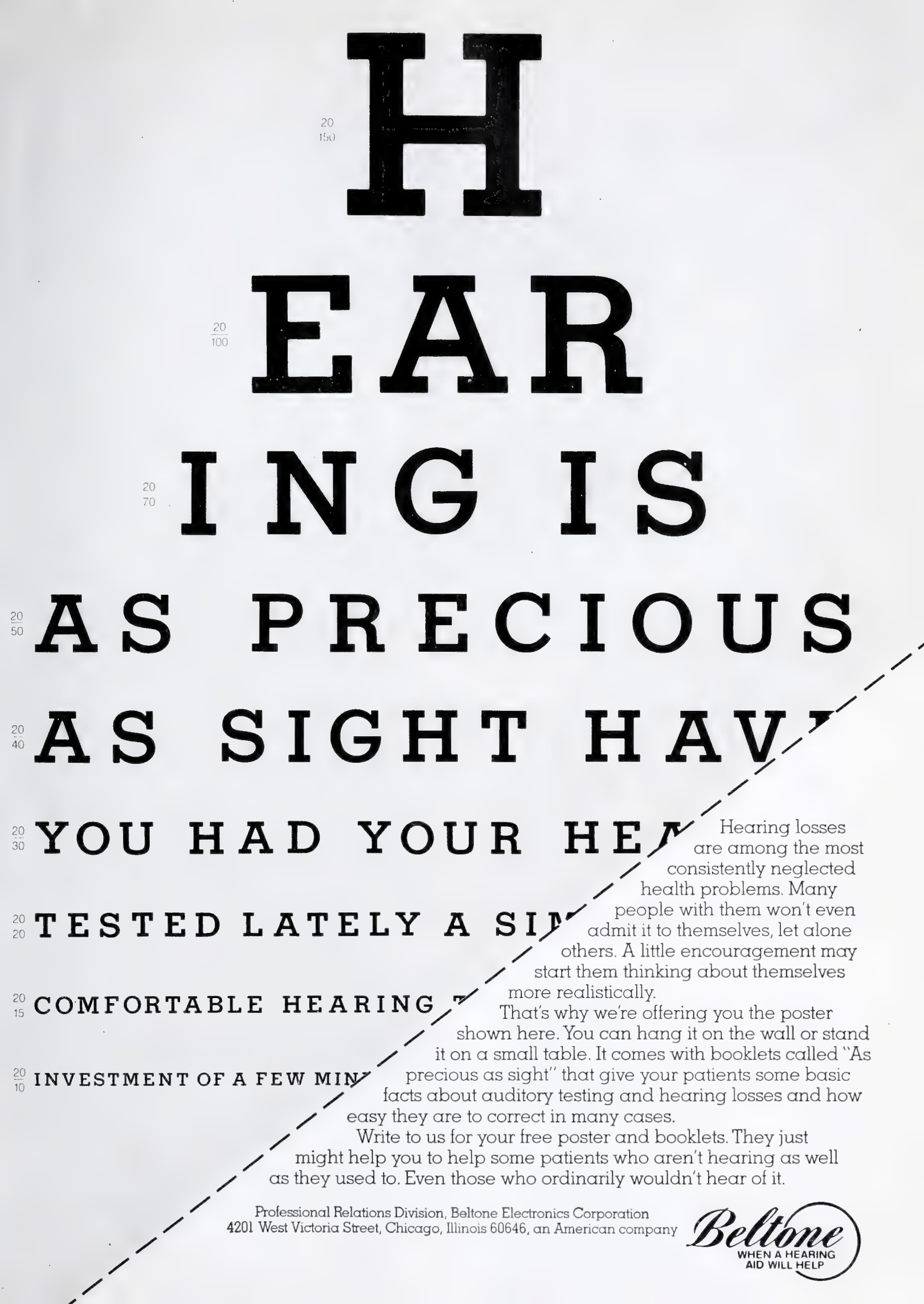

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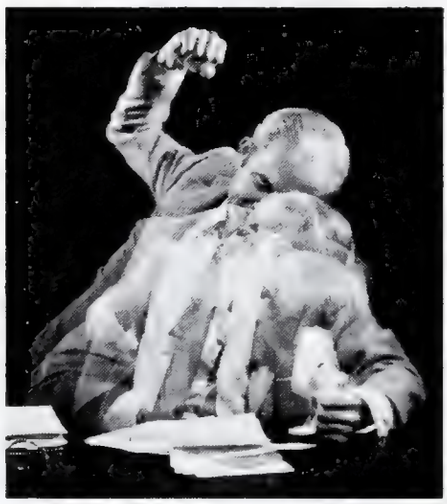

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The wet child

Edmond T. Gonzales, Jr, MD

Urinary incontinence in children is a common disorder affecting nearly one child in ten at 5 years of age.[1] Any physician who treats children will spend a significant proportion of professional time evaluating urinary wetting disorders.

Fortunately, most wetting problems are self-limited and benign, and after a careful history, physical examination, and urinalysis with urine culture, the child and parents can be assured that nothing serious is wrong. Occasionally, though, wetting may be the only symptom of a significant urological disorder which threatens both the integrity of the child's urinary tract as well as renal function. When such a problem is suspected, more extensive urological studies are indicated to properly diagnose and manage the abnormality. While recent physiologic and histologic studies have improved our understanding of bladder function, abnormal bladder function remains difficult to treat; but an accurate diagnosis and appropriate therapy can do much to alleviate the social and medical problems associated with vesical dysfunction.

The purpose of this article is to review current explanations of disorders of urinary control in children and to provide a basis for evaluation, diagnosis, and therapy. I find it useful to divide incontinent children into two groups: (1) those who wet only at night, and (2) those who have a disorder of urinary control both day and night. This distinction is important since the severity of the disorder and the extent of the initial evaluation is often determined by the history alone. In this article enuresis will refer to disorders of nighttime wetting only since the term is generally used in that context in clinical practice.

From the Roy and Lillie Cullen Department of Urologic Research, Division of Urology, Baylor College of Medicine, and from the Urology Service of Texas Children's Hospital, Houston, Texas.

Nocturnal Enuresis

The etiology of nocturnal enuresis has been the source of much speculation through the centuries, and it is clear today that no one factor can explain all cases. Current theories include a maturational delay in bladder function associated with a small capacity and urgency,[2] sleep disturbance,[3] uninhibited bladder contractions,[4] cerebral dysrhythmias,[5] and allergy.[6]

Most cases of enuresis probably represent a maturational delay in cerebral control of bladder function. Although the child is usually brought for evaluation of nighttime wetting only, careful questioning often reveals slightly increased daytime frequency with some urgency. These minor alterations of daytime voiding habits are generally ignored by the parents since they do not cause wetting except in stressful situations when a toilet is not convenient. Controlled studies have also shown that many enuretics have a smaller bladder capacity both day and night than non-enuretics, and that this appears to be a functional disorder rather than an anatomic one since bladder capacity becomes normal when the patient is under anesthesia.[2] Such patients have generally been enuretic all of their lives and may also have had difficulty in attaining daytime control.

Other causes for nocturnal enuresis are more difficult to substantiate, and in some ways sleep disturbances, uninhibited bladder contractions, or cerebral dysrhythmias may represent other manifestations of delayed neurological development. In a few individuals removal of an allergenic foodstuff from the diet has produced remarkable improvement in day and nighttime con-

trol. Allergy, however, is a cause for only a very small number of enuretics.

A familial factor may be involved. Breger[7] found that in 40% of enuretic children, at least one parent had the same disorder, and in 35%, another sibling was also affected. In another survey, it was found that when both parents were enuretic, 77% of the children were enuretic; when one parent was enuretic, 44% of the children were enuretic; but when neither parent was enuretic, only 15% of the children were enuretic.[8] Enuresis is generally accepted to be slightly more common in lower socioeconomic groups.

Behavioral disorders have long been thought to be a cause of enuresis. At times, the onset of the enuresis can be dated to a specific traumatic event such as the birth of a sibling or the loss of a parent. Yet, psychotherapy has not proven beneficial in most instances, and recent studies have shown that most children with enuresis have no more psychiatric abnormalities than a non-enuretic group their own age.[9] In addition, cessation of enuresis does not result in symptom substitution.[10] The anxiety which is often identified in the older enuretic child seems to be more a result of the disorder than its cause.

Enuresis is exceedingly common although the reported incidence varies with the author's definition of wetting. Miller and associates reported that 8.9% of children at age 5 years were wet.[1] Blomfield and Douglas,[11] in a similar study, found that 11.9% of boys and 8.4% of girls were wet at night at age 6. In all series, there is a gradual decrease in the incidence of enuresis with increasing age, and by puberty less than 1% of the population is affected.

When the history defines only a nighttime problem and the physical examination and urinalysis and culture are normal, enuresis is considered "primary," and further diagnostic evaluation is unlikely to yield significant information regarding diagnosis or treatment.[12] Although minor bladder outlet obstructions have been enthusiastically diagnosed in the past, the consensus among most authors is that organic urinary tract lesions do not commonly underlie nocturnal enuresis and that with organic lesions, other symptoms or signs are usually present in addition to the enuresis. Indeed, even among "primary" adolescent enuretics, complete urological evaluation is generally unrewarding.[13]

Treatment is tailored to the age of the child and to previous attempts to control the wetting. Evaluation of the merits of reported treatment programs is difficult because of the tendency to spontaneous cure. Most authorities agree that nighttime wetting alone causes minimal social and psychological problems until the child is 6 years old, and before that age specific attempts at control are not indicated. Some attempt to restrict fluids near bedtime is encouraged, but in the preschooler, this may be difficult to achieve and should not be a cause of hostility between parent and child. In addition, forcing fluids during the day gradually increases bladder capacity and, in some instances, has been more beneficial than fluid restriction.[14] Parental patience, tolerance, and understanding are essential elements in managing the child at this age.

When bedwetting persists beyond the age of 6 years, more active treatment is instituted. Initial management is generally pharmacologic. Since most cases of nocturnal enuresis appear to be related to a developmental and maturational delay in bladder control associated with increased

detrusor spasticity, anticholinergic therapy would seem to be of benefit. Although some improvement is seen occasionally, overall results have not been encouraging.[15]

Recently, much enthusiasm has attended the use of imipramine (Tofranil) in enuresis, and this drug has been shown to be superior to a placebo in properly controlled studies, with 60-70% of children achieving complete or much improved urinary control while taking the drug.[16] The site of action of imipramine is unknown, but it affects both the central nervous system and the bladder muscle. Dosage is instituted at .9 to 1.5 mg/kg/day, which calculates, for the average child, to 25 mg orally for children between ages 5 and 8 years and 50 mg for older children. For the child over 12 years of age, 75 mg may be required. The drug is usually given in a single dose at bedtime. When control is achieved, the appropriate dosage is maintained for several months and then tapered gradually. However, rate of relapse is high when the medication is discontinued, and a prolonged course of therapy is generally required. It would seem that the effect of imipramine is to temporize the child's problem until the normal spontaneous improvement in nighttime bladder control occurs with increasing age.

Tofranil is a toxic drug. When prescribed for a family with young children, specific precautions should be given to an adult in the family, and the medication always must be provided in a child-proof container.

Other tricyclic antidepressants, such as amitriptyline (Elavil) and nortriptyline (Aventyl), chemically related to imipramine, have also been helpful in managing enuresis. Side effects are uncommon but include dry mouth, nervousness, sleep disorders, mild gastrointestinal disturbances, and adverse personality changes. Since these drugs also improve bladder function in the presence of organic disease, they should not be dispensed without at least seeing the child in the office to assess the problem.[17]

Conditioning systems are another therapeutic regimen currently popular in some clinics. These devices, which are electric grids that close when a conducting medium such as urine passes over them, activate various alarms such as bells, lights, or gentle electric shocks. In some series cessation of enuresis has occurred with these devices in as many as 80% of patients.[18] Despite the apparent anxiety that such systems may cause, their use has not been associated with increased psychopathology. However, it is generally recommended that parental support be maximal the first few nights to prevent the child from becoming frightened when the system is activated. The devices are readily available in many retail outlets in this country. Any physician planning to utilize these devices should familiarize himself with their potential electrical hazards.

Other forms of therapy, such as behavior modification and specific psychotherapy, have been enthusiastically supported by some authors in the past but, as noted previously, have not been associated with significant rates of cure. Today, these are generally reserved for the most resistant cases or for children who have obvious psychopathology manifest by other behavioral abnormalities.

A recent publication[19] has encouraged and supported the technique of responsibility-reinforcement. In this technique, the child is encouraged to take an active role in gauging his progress by keeping an accurate record of each dry night, and the

child may be given a simple reward, such as a star on a calendar, for each dry night. With this technique and with strong parental and physician support, the overall success rate approximated that of the other programs outlined, and relapse was significantly less with a program of responsibility-reinforcement.

Wetting Associated with Underlying Genitourinary Abnormalities

Children with wetting problems both day and night are likely to have underlying urologic abnormalities and require more extensive urologic evaluation. Numerous disorders may be responsible for bladder dysfunction, but they can be conveniently classified into four groups: (1) infectious, (2) obstructive, (3) neurologic, and (4) miscellaneous. These disorders are not mutually exclusive of one another, and children with obstruction or neurologic disease may first present for evaluation when urinary tract infection develops; but each disorder may cause wetting problems by itself and must be managed independently once the infection is under control.

1. Voiding cinecystourethrogram in a 5-year-old boy with frequency and intermittent wetting. Mild dilation of the prostatic urethra and faint linear shadows consistent with posterior urethral valves are evident. Intravenous urogram was normal.

Urinary Infection

Urinary tract infections in children are common and after the neonatal period occur almost exclusively in girls.[20] In about two-thirds of cases, intravenous urograms and cystourethrograms are normal, and the infections are associated only with signs and symptoms of cystitis—frequency, urgency, dysuria, and incontinence. Significant fever is unusual unless a structural abnormality is present. In very young children the only symptom of infection may be the onset of wetting without detectable change in other voiding habits. Surgical therapy may be necessary if the urinary tract is abnormal. When no organic abnormalities exist, most children with frequent, recurrent urinary tract infections can be controlled with long-term, suppressive chemotherapy. Routine urethral dilation has not been effective in managing these problems.[21]

Some girls persist with frequency and incontinence which began initially with urinary tract infections, suggesting that the bladder may remain in an irritable state for many months after the urine is rendered sterile.[22] Anticholinergic drugs, such as propantheline bromide (Pro-Banthine) or tincture of belladonna, may assist in controlling these troublesome symptoms. The tincture preparation is particularly useful in children because the dosage can be increased slowly until either the desired effect is achieved or side effects occur.

Obstruction

Obstructive lesions in the lower urinary tract, the urethra or bladder neck may present only with wetting disorders. Infravesical obstruction results in detrusor hypertrophy, which causes bladder irritability with a small capacity, urgency, urinary fre-

quency, dribbling, and incontinence. In male infants, such obstructions are often severe with urinary infection and renal failure demanding the most urgent attention. Occasionally, posterior urethral valves, congenital urethral strictures, or anterior urethral diverticula may cause only mild obstruction and present primarily with symptoms of voiding dysfunction[23] (Fig 1). Urethral meatal stenosis in circumcised boys can, rarely, be a cause of this disorder also. In each instance, appropriate relief of the obstruction will allow the detrusor to return to normal and improve bladder function.

Obstructive lesions in girls are less well-defined and less well-established clinically. Distal urethral stenosis has been implicated as a cause of voiding dysfunction as well as of recurrent urinary infections.[24] However, urethral dilations are beneficial in only a small percentage of children who have frequency and incontinence without infection.[25]

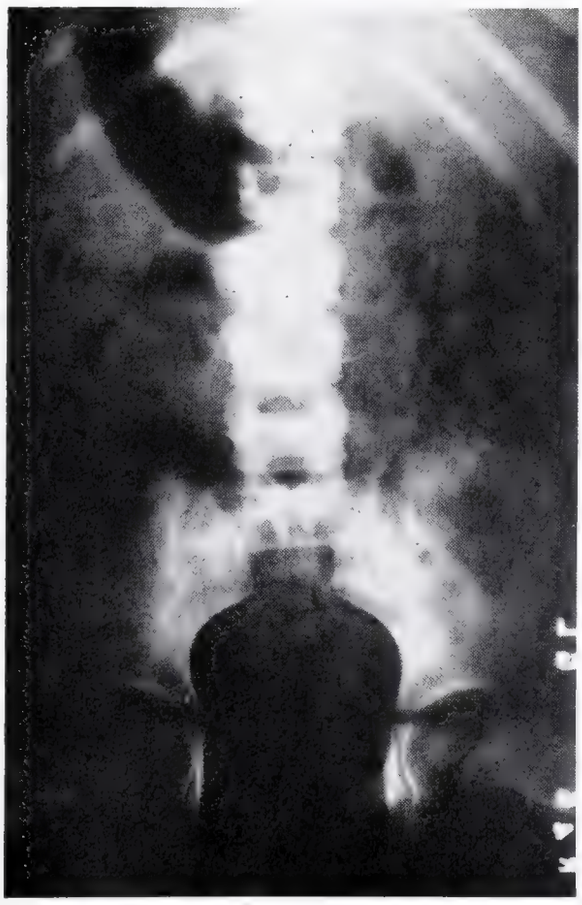
Neurological Abnormalities

Neurological abnormalities of the bladder always result in voiding dysfunction, from urinary retention to total urinary incontinence. Some defects, such as meningomyelocele, are associated with neurological derangement of the lower extremities and perineal musculature and are easy to diagnose. Other disorders, such as congenital absence of the sacrum or tethering of the conus medullaris, can be difficult to diagnose clinically since lower extremity function often is near normal (Fig 2). Children with neurogenic vesical dysfunction also have problems with stool control since innervation of the anus and lower rectum is derived from the same nerve roots as that of the bladder. On occasion, bladder dysfunction consistent with a neurogenic origin is identified without other underlying neurological defects, and is termed the non-neurogenic, neurogenic bladder, or subclinical neurogenic bladder.[26,27] Usually, though, subtle bowel dysfunction is also present.

Any of these conditions, if unrecognized and untreated, can progress to renal failure from infection with vesicoureteral reflux or ureteral obstruction. The diagnosis and degree of bladder involvement is confirmed with urodynamic studies, such as the urinary flow rate, cystometrogram, urethral pressure profile, and perineal electromyography. Careful monitoring for urinary infection and periodic radiologic evaluation of the upper urinary tract are essential to assess adequacy of treatment.

Treatment is designed to preserve renal function and provide the child with socially acceptable urinary continence. In infancy, the Crede maneuver is simple and generally

2. Roentgenogram of the abdomen of a 4-year-old girl with total, dribbling urinary incontinence reveals complete absence of the sacrum. She had continued fecal soiling also. Intravenous urogram was normal.



effective in maintaining low residuals and a sterile urine. Incontinence is controlled with a diaper, as for all children this age. Urethral dilation can assist bladder emptying by the Crede maneuver in girls with external sphincter spasm,[28] although a simple vesicostomy is beneficial in selected infants as a temporary form of urinary diversion.[29] The introduction of newer techniques for older children, such as intermittent urethral catheterization[30] and pharmacologic management of bladder and vesical neck function with autonomic drugs,[31] has decreased the need for supravesical diversion as commonly performed in the past.

3. Intravenous urogram of a 4-year-old girl with continued wetting. On the left side, there is duplication of the upper urinary tract with slightly delayed visualization of the upper segment. Inspection of the perineum revealed continual dripping of urine from the urethral meatus. (Films courtesy of M. A. Anhalt, MD.)

Mechanical devices, such as the artificial urethral sphincter devised by Scott, Bradley, and Timm, are also gaining popularity in some centers when lesser forms of management have been unsuccessful.[32] When renal function deteriorates, however, some form of permanent diversion is generally required. While still beset with certain problems, a properly done ureterointestinal conduit stabilizes or improves renal function and provides socially acceptable urinary continence.

Some cases of frequency and incontinence are associated with a small bladder capacity and frequent uninhibited contractions as seen on the cystometrogram. In younger children, this often represents delay in maturation of normal bladder function, but in a few it persists into adulthood. The symptoms are generally managed with anticholinergics and will improve in most with time and training.

Miscellaneous

Occcasionally, a ureter may be ectopic, that is, enter the bladder at a location other than the normal position on the trigone. In girls the ureter may enter the urethra or the genital tract. In either case, there is continued dribbling of urine despite normal voiding at normal intervals (Fig 3). In the male, the ureter generally enters the urethra in the prostatic portion and thus is above the external urinary sphincter. In most cases total urinary incontinence is not present, but the continued seepage of urine into the prostatic urethra stimulates detrusor irritability so that intermittent dribbling may be present. Most cases of ectopia occur in duplicated ureters and generally can be suspected on viewing the intravenous urogram. Cystoscopy with catheterization of the ectopic orifice, if found, is diagnostic. Congenital vesical neck anomalies, such as epispadias, are also associated with urinary wetting. They are generally easy to diagnose and are primary surgical problems.

Summary

Urinary incontinence in children is a common disorder. Systematic evaluation con-

sisting of history, physical examination, and urinalysis will define the majority of these disorders that are benign in nature and can be followed clinically without threat to renal function. When wetting occurs only at night, extensive urological evaluation is not necessary. Occasionally incontinence is the only symptom of a more serious urological problem and requires elaborate investigation for appropriate diagnosis and ultimate therapy. Recent developments and better appreciation of bladder function have improved management of these children so that more are able to maintain an intact urinary tract with normal renal function than in the past.

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Dr Gonzales, Director of Pediatric Urology, Texas Children's Hospital, 6621 Fannin Street, Houston, TX 77025.

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Trends in therapy: prednisone for myasthenia gravis

Bernard M. Patten, MD

Myasthenia gravis, a disease of unknown etiology characterized by weakness and easy fatigability of skeletal muscle, particularly involves the muscles supplied by the cranial nerves. It produces ptosis; ophthalmoparesis; difficulty in chewing, swallowing, and talking; and, at times, respiratory insufficiency. Limb muscle strength may also be affected with proximal muscles more often and more severely involved. Atrophy can occur but the tendon reflexes remain brisk. Myasthenia gravis may affect either sex at any age, and varies in severity from mild cases that do not progress to severe cases that become fatal.

Until recently, the anticholinesterases, including pyridostigmine, neostigmine, ambenonium, and, on rare occasions, organophosphorus compounds were the major agents available for treatment of myasthenia gravis. These drugs increased the relative concentration of acetylcholine in the neuromuscular junction, partially correcting the defect in neuromuscular transmission that is characteristic of myasthenia. Concurrent with the improvement in neuromuscular transmission, patients usually experienced increased strength and decreased fatigability.

Unfortunately, the anticholinesterases only rarely returned the patient to normal functioning. Despite the most skillful adjustment of anticholinesterase dosage, some myasthenic patients, although they became better, continued to suffer varying degrees of muscle weakness, fatigue, and difficulty swallowing, chewing and talking. Carefully taken histories often showed that profound changes had occurred in the patient's premorbid activities and satisfactions so that, for instance, avid readers gave up reading because of diploplia, and gourmets gave up eating in restaurants because of trouble chewing or swallowing. Few physicians would put up with the life style that myasthenia gravis patients were formerly expected to endure.

Prednisone, introduced for myasthenia gravis five years ago,[1] has made a dramatic difference in the lives of many patients, even in those whose cases were refractory to traditional anticholinesterase therapy.[2] Because prednisone is an effective form of therapy in myasthenia,[3-6] it deserves a trial in any patient who has significant functional disability and is not leading a satisfactory existence while taking anticholinesterase. Older patients, especially those over age 40, seem to be most likely to benefit.[2] Patients with ocular myasthenia, a form of the disease notoriously refractory to anticholinesterase drugs, may also be expected to respond. Prednisone is also useful in getting the patient into optimal clinical condition for thymectomy.

Before starting treatment with prednisone the physician should be familiar with some important points:

1. The early investigators of the effect of cortisone on myasthenia gravis often noted, during the period of initial administration of the steroid, a worsening of the patient's condition and the development of a refractoriness to the anticholinesterase drug.[7-9] The reason for this period of worsening is not known, but it has been ascribed to an adverse interaction between corticosteroids and anticholinesterase drugs at the neurosmucular junction similar to that demonstrated in the rat.[10]

Various regimens have been designed to avoid this initial worsening, but the one that seems simplest and most effective is to gradually increase the dose of prednisone from 25 mg orally every other day to 100 mg every other day during the course of one month.[11] On this regimen, patients usually experience no induction of weakness and

only a progressive increase in strength on the day they take the prednisone and a return toward baseline strength on the day they do not take the prednisone. During a few months, the "on-off" day difference gradually becomes less pronounced until the patient is better on both days. The development of muscle twitches or stomach cramps on the afternoon of the "on" day is often the first indication of excess cholinergic activity and may be used as a clinical indicator to reduce the maintenance dose of anticholinesterase as the patient improves.

2. The aim of therapy is to maintain normal functional status on the lowest possible dose given in the safest possible way. Therefore, when the patient has been functionally normal for two to three months, the prednisone dosage may be decreased 5 mg each month until the lowest dose that maintains the patient's health is reached.

3. As in other conditions responding to prednisone, alternate-day therapy is the best tolerated regimen, and also the least effective in controlling the disease.[12] When myasthenia does not improve with alternate-day therapy, once-a-day therapy should be tried; the patient takes the whole day's dose once in the morning. Those patients whose conditions do not improve with daily therapy should be tried on round-the-clock therapy, wherein the patient takes one-quarter of the daily dose every six hours.

4. Side effects of therapy are numerous and include fluid retention, aggravation of diabetes, change in facial and body fat (cushingoid appearance), hypertension, cataracts, demineralization of bone, hypokalemia, and gastrointestinal bleeding. Their occurrence can be minimized by a low carbohydrate and low sodium diet, potassium chloride supplementation, and the use of antacids.

One of the challenging problems in myasthenia gravis today is to determine which treatment or combination of treatments is best for different patients. The anticholinesterases are often enough to control mild cases. Prednisone and thymectomy must be considered in more severe cases. Probably the best plan, from the available evidence, is to try anticholinesterase first and then to treat with prednisone all those who do not respond adequately. When the patient has achieved a good clinical response with prednisone, thymectomy should be done and the prednisone continued as needed to maintain the patient's level of improvement.

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Dr. Patten, Chief, Neuromuscular Diseases, Department of Neurology, Baylor College of Medicine, Houston, TX 77030.

Salmonella heidelberg as a causative agent of meningitis

A case of meningitis caused by *Salmonella heidelberg* in an infant is reported. Human infections with this organism are relatively uncommon, and *S heidelberg's* causal relationship in meningitis has been previously reported only once in the United States.

Since its first isolation by Habs[1] in 1933, *Salmonella heidelberg* was rarely implicated in human infections until 1953, when Mackey[2] reported that it was the third most common of the salmonellae occurring in Dar es Salaam. Gastrointestinal infections with *S heidelberg* started appearing in Europe and America about the same time.[3-5] MacCready and associates[4] reported eight isolations of this organism from 3,190 cases of salmonellosis in Massachusetts from 1940 through 1955. Although the organism is mainly associated with gastrointestinal disturbances, it also has been isolated in cases of generalized infections. Breitenfeld and others[6] reported the isolation of *S heidelberg* from cases of septicemia, pneumonia, and urinary tract infections. To our knowledge there are only three documented reports of its isolation from spinal fluid;[6-8] these cases were in Russia, Yugoslavia, and the United States. We believe that this is the second report of isolation of *S heidelberg* from a patient with clinical signs of meningitis.

Case History

A 7-month-old black boy was admitted to the Ben Taub General Hospital with a six-day history of fever, lethargy, and vomiting. The patient had been treated with antibiotics, but did not respond. Physical examination on admission revealed a temperature of 38.4C (101.2F), pulse rate of 130 beats per minute, and respirations 28 per minute. The patient was lethargic and his neck was rigid. No petechiae were observed. A lumbar puncture produced cloudy cerebrospinal fluid (CSF) with a glucose of 48 mg/100 ml; protein, 360 mg/100 ml; and white cell count of 12,000 with 97% polymorphonuclear leukocytes. Gram staining of the sedimented spinal fluid showed gram-negative bacilli. The patient was started on intravenous fluid of 0.85% saline, containing 5% glucose, 500 ml/day, and was treated with ampicillin (300 mg/kg/day) for 21 days. The CSF culture grew *Salmonella* which was susceptible to ampicillin, chloramphenicol, tetracycline, cephalothin, colistin, and streptomycin. The isolate was identified by serotyping as *S heidelberg* at the Houston City Health Department Laboratories. The patient responded to treatment, and a repeat spinal tap on the third hospital day showed cloudy fluid with 28 mg/100 ml glucose, 93 mg/100 ml protein; and 280 white cells with 50% polymorphonuclear leukocytes. Gram stain was negative for bacteria, and spinal fluid culture was sterile. During the course of chemotherapy there was an improvement in the patient's condition and he became afebrile. On the 21st hospital day the CSF was clear, with 54 mg/100 ml glucose, 14 mg/100 ml protein, and a decrease in the spinal fluid leukocytes to 60 cells. The patient remained afebrile after ampicillin was discontinued, and he was discharged on the 28th hospital day.

Complications of salmonellosis do not frequently include central nervous system involvement. However, under certain conditions, especially in infants, salmonella meningitis poses a serious problem.[9] Guthrie and Montgomery[10] reported a hospital epidemic in which ten infants died with septic meningitis caused by *S enteriti-*

dis. In another outbreak of meningitis, in which the fatality rate was 100%, 21 children died of infection due to *S havana*.[11] Septic meningitis due to *S panama* has been described.[12,13] Henderson[14] and Riley and Deardoff[15] found that species of *Salmonella* which are responsible for the majority of cases of meningitis are *S enteritidis, S havana, S paratyphi B, S panama, S choleraesuis,* and *S typhimurium*.

Saphra and Winter[16] noted that of the 7,779 human infections caused by salmonellae in New York in 16 years, only 77 consisted of meningitis. They further found that all these patients were infants, frequently only a few days or weeks old. Salmonella meningitis seems to occur chiefly in infants, with 80% of reported cases being in children and young adults; the reason for this age distribution is not known. Ziai and Haggerty[17] reviewed the factors that may predispose the infants to meningitis. Otila[18] suggested a possible mechanism for this susceptibility by demonstrating an increased permeability of infant meninges to a dye, indicating that the organism, which gains access to the circulation, may penetrate and localize in the central nervous system to a greater degree than in older patients.

Isolation of *Salmonella* from CSF is relatively rare. MacCready and associates[4] reported nine cases of meningitis among 3,190 salmonella infections in Massachusetts during a period of 16 years. Similarly, Saphra and Winter[16] found that 0.8% of the 7,779 salmonella infections resulted in meningeal involvement. Although meningitis caused by *S heidelberg* has been reported only twice in Eastern Europe and Russia, and once in the United States prior to this report, the severity and seriousness of such infections cannot be overemphasized because of the relatively asymptomatic nature of the disease in early infancy. Like most other salmonella meningeal infections, all cases of *S heidelberg* meningitis cited here, involving seven patients, occurred in infants, and two of them resulted in death.

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The authors, Departments of Pathology, The University of Texas Medical School at Houston, Baylor College of Medicine, and Ben Taub General Hospital, Houston, TX 77030.

Correspondence to Dr. Qadri, Director of Microbiology, The University of Texas Medical School at Houston/Hermann Hospital, Houston, TX 77030.

Unusually severe cases seen in an explosive epidemic of influenza and influenza-like disease at Fort Dix, NJ, 1951

Santino J. Lerro, MD; Frederick Schmerer, MD; Adam J. Rapalski, MD*

In view of the possibility that an outbreak of swine influenza may occur in Texas this year or in the next year or so, it may be timely to report again on a few of the unusually severe cases seen in an explosive epidemic of influenza and influenza-like disease that occurred at Fort Dix, NJ, early in 1951.[1]

The Fort Dix outbreak was part of an epidemic occurring in the United States and other countries during 1950-1951. A series of studies of influenza and influenza-like diseases had been in progress at Fort Dix since the fall of 1947.†

From Jan 1 through March 31, 1951, more than 3,400 patients were admitted to the US Army Hospital at Fort Dix. The majority showed only mild influenza symptoms such as chills, fever, malaise, generalized aches, sore throat, congested nares, persistent cough, profuse sweating, and weakness. Usually the illness ran a short febrile course and was followed by rapid and complete recovery. A small number of the patients, however, were severely ill, with various debilitating complications and prolonged convalescence. Thirty patients (0.88%) had pneumonia with delayed resolution despite adequate chemotherapy, and four (0.12%) had myocarditis, which often appeared late in the course of the illness or during convalescence. The case reports illustrate these uncommon features.

*Deceased.

†These studies, conducted under the auspices of the Commission on Influenza of the Armed Forces Epidemiological Board, were carried out with the support of the Office of the Surgeon General of the Army, in collaboration with the Fort Dix medical staff and the First US Army Medical Laboratory. These studies were directly supervised by Jonas E. Salk, MD, University of Pittsburgh.[2]

Case Reports

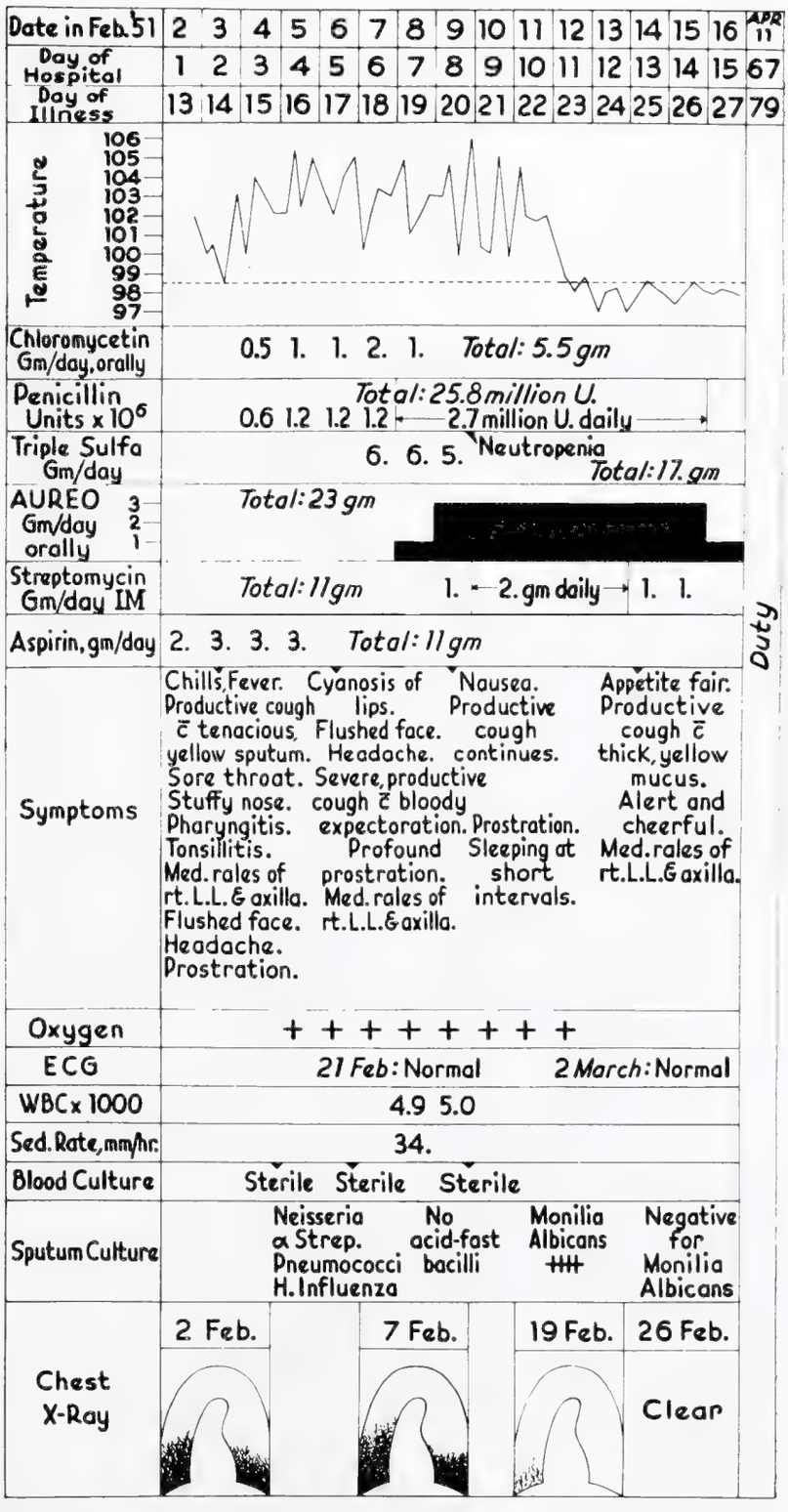
Case 1: An 18-year-old man who had had "a common cold" since Jan 20 was admitted to the hospital on Feb 2 because of acute illness and the finding of coarse rales throughout both lung fields. Physical examination on admission revealed dullness and numerous moist rales over the right lung field posteriorly and in the right axilla. The remainder of the admission findings and a summary of the patient's complete hospital course are shown in Fig 1.

This was a case of serologically proven influenza A complicated by bilateral pneumonia, with a severe, prolonged, hectic, febrile course. The disease did not respond to multiple-antibiotic and sulfonamide therapy. There was delayed resolution of the pneumonia, and *Candida albicans* was recovered from the sputum following the intensive use of antibiotics.

Case 2: A 22-year-old man had been increasingly ill with what appeared to be mild influenza since Feb 2, and was admitted to the hospital on Feb 9; symptoms are shown in Fig 2. Shortly before admission, vomiting and some diarrhea had developed. Fig 2 summarizes the complete hospital course.

In this case of serologically proven influenza A complicated by bronchopneumonia, there was prolonged high fever, mental confusion and actual delirium, and eventual ECG findings compatible with myocarditis. There was no apparent response to antibiotics and sulfonamides. Occasional pneumococci were found in the sputum

This article was published in the April 1958 issue of the *United States Armed Forces Medical Journal*. Although *Texas Medicine* usually does not accept previously published material, the editors have made an exception because of the current concern that a severe influenza outbreak might be imminent.



1. Consolidated hospitalization chart; case 1, influenza A and bilateral pneumonia.

culture taken on admission, but none grew in the blood culture.

Case 3: A 22-year-old man was admitted to the hospital on Feb 11 for a respiratory condition of four days' duration. He was acutely ill and there was dullness and bronchial breathing over the right chest anteriorly. Fig 3 lists his symptoms on admission and presents a summary of his complete course while hospitalized.

This patient had serologically proven influenza A complicated by pneumococcci pneumonia as evidenced by lobar consolidation seen in roentgenograms of the chest, a high white blood cell count, and the presence of pneumococci in the blood stream. Despite intensive antibiotic and triple sulfonamide therapy, the pneumonia did not resolve completely until the 60th day of illness, and some residual pleural thickening in the right costophrenic angle remained. Even in the presence of unresolved pneumonia, however, the patient's temperature was normal after the 13th day of his illness and he was relatively symptom-free after the 30th day.

Case 4: A 22-year-old man who had had malaise, fever, cough, and sore throat for three days, was admitted to the hospital on Feb 25 with a temperature of 41.33C (106.4F). He was delirious and vomiting repeatedly. His pulse rate was 135 per minute and respirations were 30 per minute and shallow, but no abnormal signs were elicited on examination of the heart and lungs. A summary of the details of the course in hospital is presented in Fig 4. Serologic study of blood serum during acute and convalescent stages revealed no significant rise in antibody titer for influenza.

This patient had a severe influenza-like illness which soon was complicated by pneumonia and later by myocarditis. The pneumonia developed on the ninth day of illness, after four days of treatment with penicillin and Chloromycetin. Multiple-antibiotic and sulfonamide therapy had no clinically observable effect on either the influenza-like illness or the pneumonia, and pneumococci still could be recovered from the sputum after prolonged treatment with penicillin, Aureomycin, Chloromycetin, and triple sulfonamide. During the later stages of the patient's illness, there was ECG evidence of myocarditis as manifested by development of ST-T changes. This persisted for more than a month, but was followed by complete recovery.

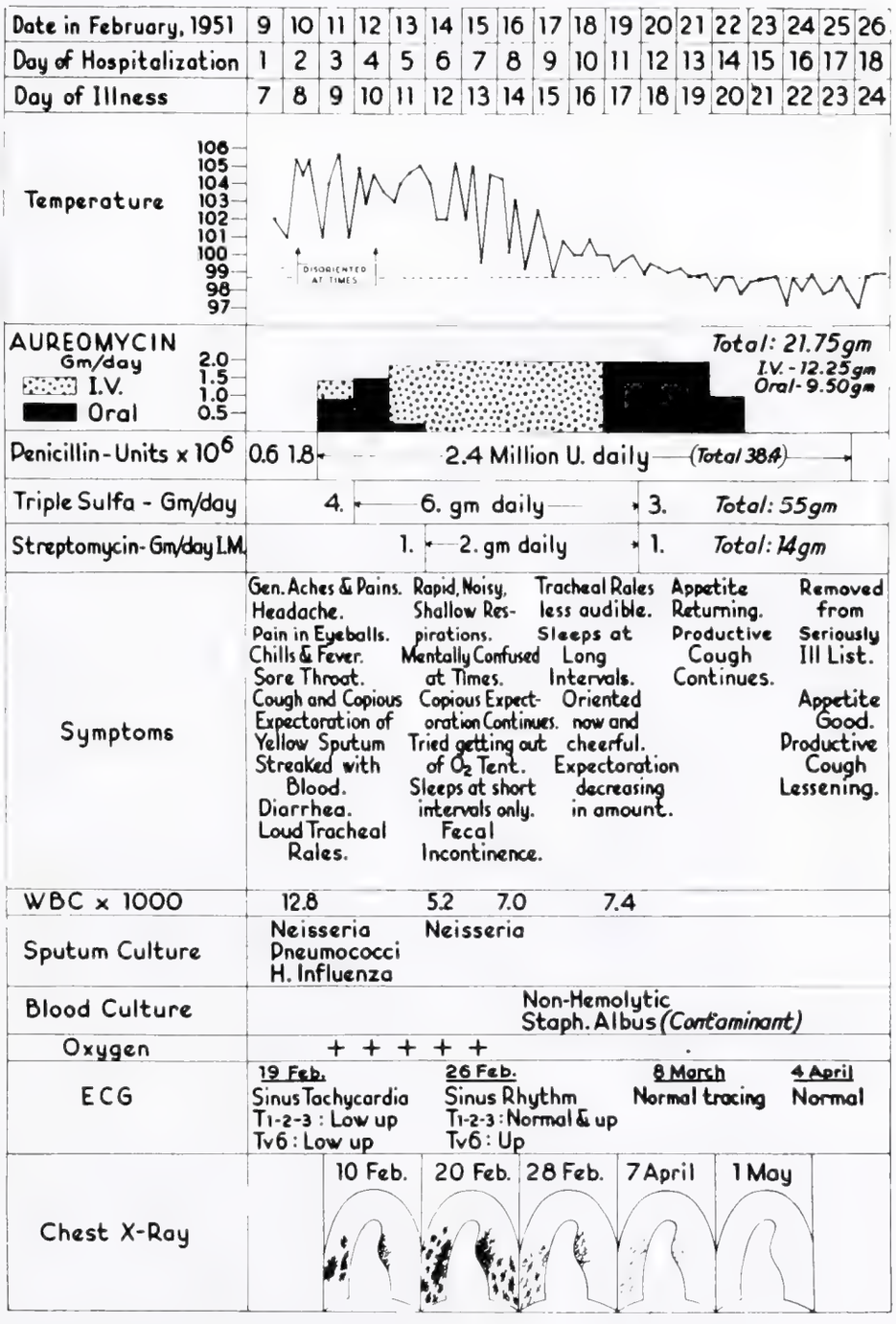
Discussion

The four cases reported represent a relatively small number in which influenza A or the influenza-like illness assumed a severe and malignant form, or in which there were serious complications. To a variable extent, there was pulmonary infiltration with notably delayed resolution, prolonged hectic fever, severe prostration with impending circulatory collapse, and ECG evidence of myocarditis. Lymphadenopathy appeared in many cases, and in an occasional case there was splenomegaly.

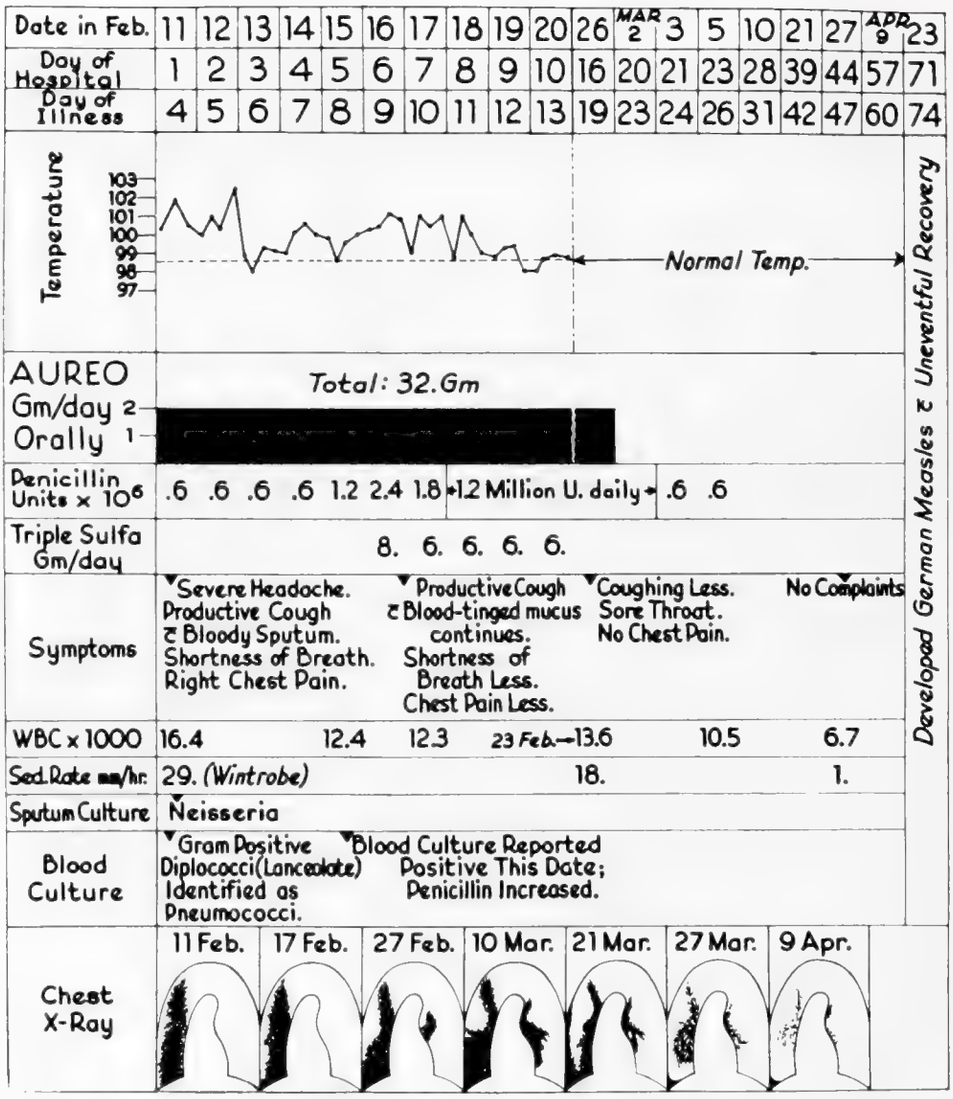
Myocarditis

An important observation in this epidemic was that a previously healthy young soldier with influenza A or the influenza-like illness could have such a serious complication as myocarditis late in the course of the illness or during convalescence, with a resting tachycardia being the only clinically suggestive sign.

In view of this finding and of the report



2. Consolidated hospitalization chart; case 2, influenza A with bronchopneumonia and myocarditis.



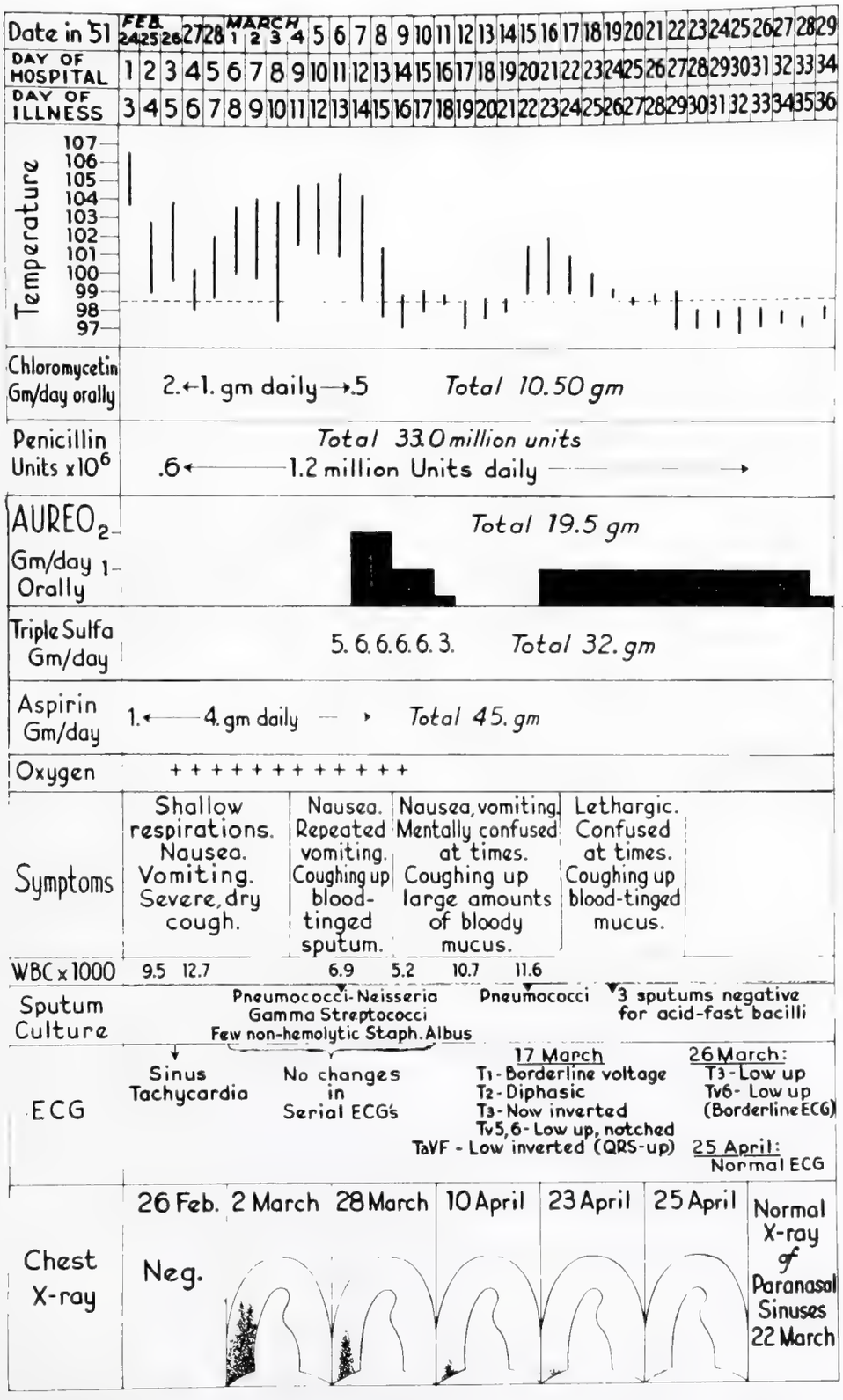
3. Consolidated hospitalization chart; case 3, influenza A and pneumococcic pneumonia.

by Finland and associates of two cases of influenza with postmortem findings of acute nonbacterial myocarditis,[3] during the remainder of the epidemic, ECGs were obtained on all patients in whom complications, an unusual clinical course, or persistent tachycardia developed, particularly if it occurred late in the course of the illness or during convalescence.

Had ECG studies not been done, this complication would not have been recognized and, therefore, not treated. No specific therapy was given these four patients with myocarditis, except bed rest with bathroom privileges only, until the ECG returned to normal; thereafter, a gradual return to full activity was carried out. No complications developed subsequently, to our knowledge.

Pneumonia

The incidence of pneumonia (all types) with roentgenographic confirmation in this epi-



4. Consolidated hospitalization chart; case 4, influenza-like syndrome with pneumonia and myocarditis.

demic was 0.88%. There generally was a delay in resolution, despite intensive use of antibiotics.

Fever

In uncomplicated cases, the temperature ranged from 38.3C (101F) to 40C (104F) for three to five days, with return to normal by crisis or lysis and an afebrile course thereafter.[2] There was no discernible difference in the effect of Aureomycin and of APC (aspirin, phenacetin, and caffeine) on the duration or degree of fever in these patients.[4] A few cases showed unpredictable swings of temperature, with elevation for one or two days, then a drop to normal for four or five days, and then a sudden elevation and subsidence, only to be repeated some days later. Cases of this type were screened carefully for complications. Occasionally a roentgenogram of the chest revealed a pneumonic infiltration for the first time following such a flare-up in temperature.

Prostration

There often was profound weakness during the first days of illness, but this generally decreased after two to three days. However, post-influenzal asthenia was present in noteworthy degree in an occasional patient. It was necessary to retain such patients in the hospital until the asthenia had completely disappeared before allowing them to return to duty.

Role of Antibiotics

Neither antibiotic nor chemotherapeutic agents in any combination altered the course of these diseases. In some instances, after about ten days of fever, despite the use of combinations of antibiotics, a drop in temperature followed the addition of another antibiotic, but this might have been coincidence. It is believed that the influenza virus has a pathogenicity of its own for which no appropriate medication is available, and that the treatment must consist of employing sound medical principles of therapy, good nursing care, supportive measures, and continual patient surveillance to recognize complications as they arise.

In case 1, the use of a combination of antibiotics suppressed the normal bacterial flora of the respiratory tract so completely that a pure culture of *C albicans* was obtained. This is one of the hazards of the Prolonged use of antibiotics in large doses.[5]

Results of Treatment

No deaths occurred in the treatment of approximately 3,400 cases of clinical influenza, in contrast to the large number of deaths in older people noted in the 1951 epidemic in the area of Liverpool, England.[6] While the vigor and youth of our group of patients were factors of prime importance in determining the favorable course of this epidemic, careful medical observation, good nursing care, and prompt institution of supportive measures, including oxygen and parenteral fluids, played an important role in facilitating the recovery of the seriously ill patients.

Summary

Approximately 3,400 patients with influenza-A and an influenza-like disease were hospitalized during an explosive epidemic of mixed etiology in early 1951 at Fort Dix.

A few cases assumed an unusually severe and malignant form. Myocarditis, an important though infrequent complication, appeared late in the course of the illness or during convalescence in four cases. Pneumonia, with delayed resolution despite intensive use of antibiotics and chemotherapy, occurred in 30 patients. In one of the four cases presented, candidiasis developed as a consequence of antibiotic therapy. Neither antibiotics nor chemotherapeutic agents had any specific effect in altering the clinical course, nor was there any salutary effect from any combination of drugs; however, there were no deaths in this series, and the most effective treatments were good nursing and prompt supportive measures.

Postscript

As a current update to this article it is recommended that the approved type of influenza vaccine(s) be administered before the influenza season is expected, especially for individuals *of all ages* suffering from chronic diseases (heart disease, chronic bronchopulmonary diseases, chronic renal failure, diabetes mellitus and other chronic metabolic disorders, chronic neuromuscular disorders, malignancies, and immunodeficient states) and for older persons, especially those over 65 years of age. Influenza vaccines through the years have proven their effectiveness in preventing and in lessening the severity of the disease in a large majority of individuals.

—Santino J. Lerro, MD.

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Dr Lerro, Texas Department of Health Resources, 1100 West 49th St, Austin, TX 78756.

Dr Schmerer, 2010 Crotona Ave, Bronx, NY 10457.

The hidden energy crisis: oil and gas raw materials in medicine

David H. Glenn, MD

I suspect that many Texans have been watching the national energy headlines with a detached interest during the past two to three years. The energy "crisis" might seem to be rather distant for Texans who feel surrounded by abundant supplies of gasoline for their cars and gas to heat their homes. Some physicians may even share the peaceful illusion of this misconception.

Behind the newspaper headlines, however, is a hidden energy problem which most of us have probably overlooked—that oil and gas are essential petrochemical raw materials for literally hundreds of medical instruments and equipment and thousands of pharmaceuticals. Government energy policy decisions made in Washington, and those made in Texas, have a direct effect on the practice of medicine.

Petrochemical Plants

To understand the potential impact, we need to study the role of a typical petrochemical plant. Crude oil and natural gas are basic raw materials which are "cracked" in a series of highly complex steps to separate them into primary products, which are, in turn, transformed into a series of usable chemical products, or into a variety of plastics.

At varying stages in the manufacturing process, these chemicals and plastics become materials for a variety of medical applications. For example, Union Carbide Corporation, as an intermediate chemical manufacturer, makes more than 200 separate chemical products which are used in basic pharmaceutical applications alone.

Chemicals in Medicine

In order to develop a basic understanding of the far-ranging importance of oil and gas raw materials in the everyday practice of medicine, we can take a look at the pharmaceutical uses of three basic chemical groups:

1. Phenol, acids and anhydrides, alkanolamines and aldehydes: These are used for analgesics, antihistamines, antibiotics, antibacterials, sedatives, and tranquilizers.
2. Esters and alcohols: These are utilized in the fermentation process in manufacturing antibiotics.
3. Polyethylene glycols, hydroxyethyl celluloses and water-soluble ethylene oxide polymers: These are required for processing as tablet binders and pill coatings.

In fact, petrochemicals play an essential role throughout pharmaceutical manufacturing, from basic aspirin to the growth of penicillin molds.

A common medication for a patient might require ethanol as a solvent to extract the antibiotic in manufacturing, or contain a nonionic or anionic surfactant; polyethylene glycol is a vehicle used for rectal suppositories, and phenylpropanolamine is used in cough syrup.

Instruments and Supplies

Another far-reaching impact of petrochemicals in medicine comes in their varied applications as raw materials in manufacture of instruments and supplies. The entire utilization of disposables for maintaining sterile conditions and controlling the spread of infection is based on the use of plastics. Likewise, the pioneering technology now being developed in heart valves and related implants is based on the use of specialized plastics.

The real impact lies in the commonplace items which are taken for granted in

our hospitals and examining rooms. Isopropanol, as an oil-and-gas-derived petrochemical product, is the familiar rubbing alcohol used daily. Polyethylene and polyvinyl acetate are used in a myriad of medical products such as tubing, sheeting, splints, prostheses, blood bags, disposable syringes, and catheters.

Another petrochemical, ethylene oxide, is now used for sterilization of equipment in hospitals and in pharmaceutical manufacturing to prevent hepatitis transmission. Ammonium nitrate is a basic ingredient in those handy "quick cold" packages.

Similarly, nitrogen mustards have been a long-standing part of chemotherapy in cancer treatment. Propylene glycol has been used for obtaining specimens for sputum cytology.

All Specialties

Petrochemicals touch the daily practice of virtually every physician and specialty in medicine today. They appear in radiological dyes and films, dermatological creams, disposable proctoscopes, sigmoidoscopes, IPPB machines, otoscope tips, and speculum probes. Emergency and surgical rooms hold a host of these products—endotracheal tubes, intravenous tubing, syringes, and oxygen masks.

In other words, oil and gas products are an unseen and overlooked part of the daily medical practice of every physician. The only possible exception might be the psychiatrist, but if he uses a vinyl couch or prescribes a tranquilizer, then he, too, joins the wide medical world of petrochemical product users.

As proof of their importance for yourself, simply glance around your examining room or a hospital. Virtually all of the instruments not made of metal or wood are supplied in part by oil and gas raw materials. The overwhelming majority of pharmaceutical companies use petrochemicals in their manufacturing process. In fact, even the printing inks for this article and those in other medical journals use petrochemicals.

Every day, we work in the center of an array of end products from oil and gas, and the next time an energy problem is in the headlines, I hope that all of us have a fuller understanding of its direct impact on our profession and our capability to provide the best medical care for our patients.

The United States really is facing a problem with dwindling domestic supplies of oil and gas, and a growing dependence on unstable foreign supplies. In the months and years ahead, government will have to become more effective in dealing with this shortage of energy supplies. I hope that future government decisions will preserve a portion of our available oil and gas for their somewhat hidden, but essential raw material role as raw petrochemical products for medical use. In some cases this may mean higher prices for oil and gas, but from a medical standpoint alone, that may be necessary if we are to have ample supplies for use as both fuels and essential raw materials.

Dr Glenn, Gulf Coast Medical Director, Chemicals and Plastics Division, Union Carbide Corporation, PO Box 471, Texas City, TX 77590.

The mentally ill defendant in Texas: a new perspective

The problems of the mentally ill defendant in the criminal and mental health processes have been the subject of much discussion, conflict, and controversy in the past few decades. The questions being posed and the positions being taken are so many and complex and the needs for reform so various that it is difficult to deal with the subject on an objective level.

Much of the debate has taken the form of confrontation between psychiatrists and lawyers over the test of criminal responsibility. Generally, psychiatrists favor therapeutic rather than punitive treatment of offenders, while lawyers seek to maintain the principle of criminal responsibility.

In other cases, both lawyers and psychiatrists err too much in finding clients incompetent, which sometimes means that the client spends more time in a locked mental hospital than he would have spent in prison if he had been sentenced without the issue of mental competency. Adding to this is the tendency of psychiatrists to overpredict dangerousness, the lack of specific standards for predicting dangerousness, and the reluctance of public mental health professionals to release the so-called criminally insane for fear of legal or public reprisal. The issue goes beyond the test of criminal responsibility; it involves the whole dilemma of how society should treat, and/or wants to treat, this individual. No matter what legal or psychiatric test of competency is applied, other unspoken factors do influence the outcome of the case: the enormity of the crime, evidence presented on the mental condition of the defendant, and his apparent dangerousness. Perhaps the most important influence, however, is what the jury knows or thinks about the likely practical outcome of acquittal: Will the defendant receive total freedom or relatively short-term civil hospitalization, or will he be confined to a maximum security institution for life or until cured? Perhaps, too, each jury member's personal feelings about mental illness also enter into this decision.

For the lay public, and even for some professionals in law and psychiatry, this situation does not seem to be ambiguous. If a person has been labeled as a criminal, he is considered *bad;* if a person has been labeled as mentally disturbed, he is considered *mad.* These labels and the public reactions to each seem to be relatively straightforward and unperplexing; however, if a person happens to be unfortunate enough to be labeled as both criminal and mentally disturbed (*bad-mad* or *mad-bad*), the complexity of the actions and the attitudes toward him greatly increases.

Sensational newspaper articles exploit crimes committed by former mental patients, and the occasional bizarre crimes that they commit arouse much more public attention than do the run-of-the-mill burglaries they most frequently commit. Behind much of the problem lies the widely accepted assumption that mentally ill people, particularly those who have been charged with crime, are somehow uniquely dangerous.[1] Despite public education programs to the contrary, this belief still is widespread. The label "mental illness" increases public anxiety, and when the label "criminally insane" is added, hysteria ensues. If it is really true that the mentally abnormal offender is more dangerous than others, the assumption is (although it is seldom articulated) that the established sanctions of the criminal law, and even the legitimate preventive detention of civil commitment, are not sufficient to protect the public against mentally ill criminals. If this assumption is correct, then what is needed is assurance that the

Harold K. Dudley, Jr, MS;
Ellis M. Craig, PhD;
Harold C. Domres, Jr, MD;
Terresa Stallworth, MD

presumed offender will be kept in custody (for life if necessary) so long as he remains mentally ill or there is a possibility of his committing another offense.

The specter of dangerousness haunts and perverts society and is reflected in the legal processes. Rarely a week goes by that those of us who work in public psychiatry do not receive a telephone call from someone saying, "Please lock my son/daughter/wife/other relative up forever." The caller ignores the recent attention to patients' civil rights and the possibility of cure or relief of symptoms in many mental conditions.

Society's fear of the dangerous madman can be seen in the choice of legal procedures and the reluctance of civil as well as criminal mental institutions to discharge patients who have been charged with a crime. Even civilly committed patients charged with minor offenses may be held beyond the point of recovery when most other patients would have been discharged. They are much less likely than other patients to be permitted the usual ground privileges, home visits, and conditional discharges which are considered an important part of therapy for hospitalized psychiatric patients. Mental health professionals fear public outrage if these patients should commit an offense. Although many mental health and legal professionals have argued that society's fears associated with the mentally ill defendant are unrealistic and exaggerated, extreme conservatism in dealing with this population still prevails even though many could be treated in an open hospital or on an outpatient basis only.

Case Example

A 44-year-old, black, nonpsychotic man of borderline intelligence was alleged to have been the driver in a service station holdup. He had no prior history of offenses, hospitalizations, or any other violent behavior, and he was labeled "incompetent" and committed indefinitely to a maximum security unit for the criminally insane, where he spent 21 years. (The other participants in the robbery received brief terms in jail and were released early on parole.)

A new psychiatrist finally began arranging for release, and on examination the patient was found to be completely nonpsychotic. He was competent and was a hard worker as a janitor for a large 500-bed building at a state hospital. His personality was pleasant, he had no thought disorder or history of aggressive acts, and he had not attempted to steal again. He was a favorite of the hospital staff and was well thought of; nevertheless, his family expressed extreme reluctance to take him home for fear of being murdered in their beds at night since he had been in a maximum security unit for the criminally insane.

They finally took him because he had some Social Security income that would be of assistance to the entire family. He was returned to the hospital within the next six months and readmitted because he essentially had no other home. Later, he was released to a foster home where he has shown no further efforts at any type of criminal behavior.

Clarifying Procedures

In an effort to bring about some order and clarity to the legal and mental health procedures utilized with mentally ill defendants in Texas, the Texas Department of Mental Health and Mental Retardation, with the help of other interested individuals, prepared and submitted to the 64th

Texas Legislature a set of proposed revisions to Article 46.02 of the Texas Code of Criminal Procedures. After considerable deliberation, the legislature passed a new statute relating to the status of mentally ill defendants.

This revision of Article 46.02 of the Texas Code of Criminal Procedure is this state's response to the growing concern about equal protection, least restrictive alternative, right to treatment, and due process as they affect the mentally ill criminal defendants in the state. It is of utmost importance that these new proceedings be communicated to those who are most involved.

Provisions of New Law

In summary, Article 46.02, Texas Code of Criminal Procedure, now provides:

Pre-Trial Evaluations

The period for holding a patient for pretrial evaluation for "competency" or "insanity" is now 14 days. The examiner(s) must send a written report to the committing court within 21 days, and the report must include:

1. A description of the procedures used in the examination;

2. The examiner's observations and findings as to the defendant's competency to stand trial;

3. Recommended treatment; and

4. If incompetent, observations and findings as to whether there is a substantial probability that the defendant will attain the competency to stand trial in the foreseeable future.

An opinion as to the defendant's mental competency to stand trial and an opinion as to his sanity at the time of the offense may be requested by the court in the pretrial evaluation, but each issue must be written and reported separately.

Competency Hearing

A defendant is presumed competent to stand trial unless a preponderance of the evidence proves that he is incompetent. The jury must determine (1) whether the defendant is incompetent to stand trial; and (2) whether there is no substantial probability that the defendant will attain the competency to stand trial within the foreseeable future.

Competency Disposition

If the defendant is found competent by the jury, he may then be tried on the merits of the case.

Incompetency Disposition

1. When a defendant has been determined incompetent to stand trial and unlikely to attain such competency in the foreseeable future, the court commits the defendant to the maximum security unit of Rusk State Hospital, to the maximum security unit of any other facility designated by the Texas Department of Mental Health and Mental Retardation, to an agency of the United States operating a mental hospital, or to a Veteran's Administration hospital for a period not to exceed 12 months.

The statute itself does not preclude the court from allowing the defendant to be released on bail if the court determines that the defendant can be adequately treated on an outpatient basis for the purpose of attaining competency to stand trial.

The facility to which the defendant is committed must develop an individual program with the purpose of aiding him to

achieve competency, and report his progress to the court at least every 90 days. The head of a facility to which a person has been committed shall promptly notify the committing court: (a) when he is of the opinion that the defendant has attained competency to stand trial; or (b) when he is of the opinion that there is no substantial probability that the defendant will attain the competency to stand trial in the foreseeable future; or (c) 14 days before the expiration of the 12-month commitment.

2. If a defendant is found incompetent to stand trial and there is found no substantial probability that he will become competent in the foreseeable future, or if the defendant has been previously committed to a facility (under Subsection "a" of Section 5 of Article 46.02, VCCP) and it appears to the court that the defendant requires observation or treatment in a mental health or mental retardation facility for his own welfare and protection or the protection of others, the court shall transfer the defendant to the appropriate court for civil commitment proceedings.

A person committed to a mental health or mental retardation facility as a result of these proceedings is committed to the maximum security unit of Rusk State Hospital or to the maximum security unit of any other facility designated by the Texas Department of Mental Health and Mental Retardation. Within 30 days following commitment, the person shall be transferred to a nonsecurity unit of a mental health or mental retardation facility designated by the Texas Department of Mental Health and Mental Retardation unless he is determined to be manifestly dangerous. The head of the facility is notified by the prosecuting attorney that criminal charges against the patient are pending.

At least 14 days before the patient's discharge, the prosecuting attorney is notified; the attorney also receives a written report as to the competency of the person to stand trial.

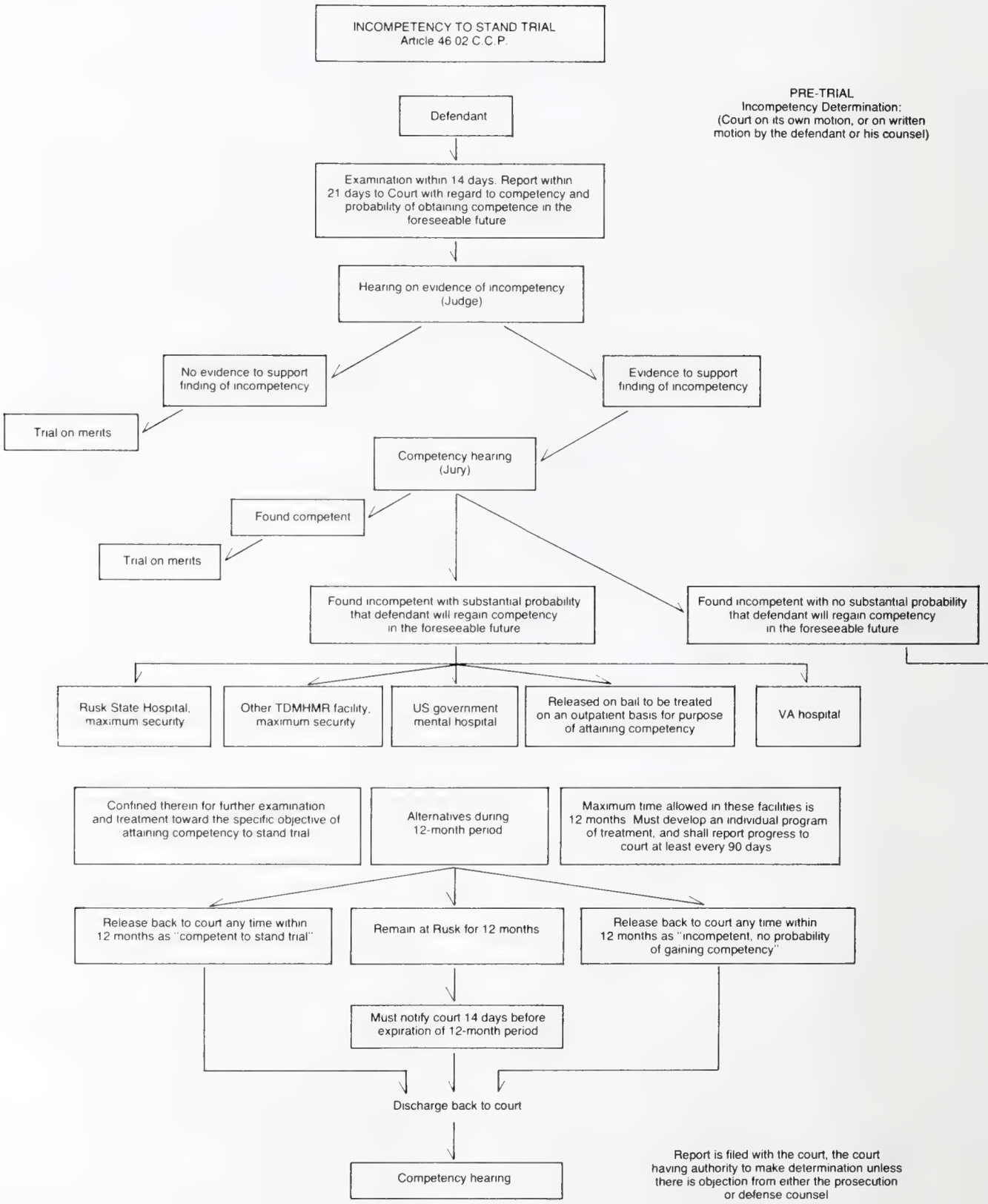
On written notice by the head of a mental health or mental retardation facility that, in his opinion, a person who has been civilly committed to that facility, and against whom criminal charges are pending, is competent to stand trial, or on good cause shown by the defendant, his counsel, or the prosecuting attorney, the court in which the criminal charges are pending may hold a hearing to determine the competency of the defendant to stand trial.

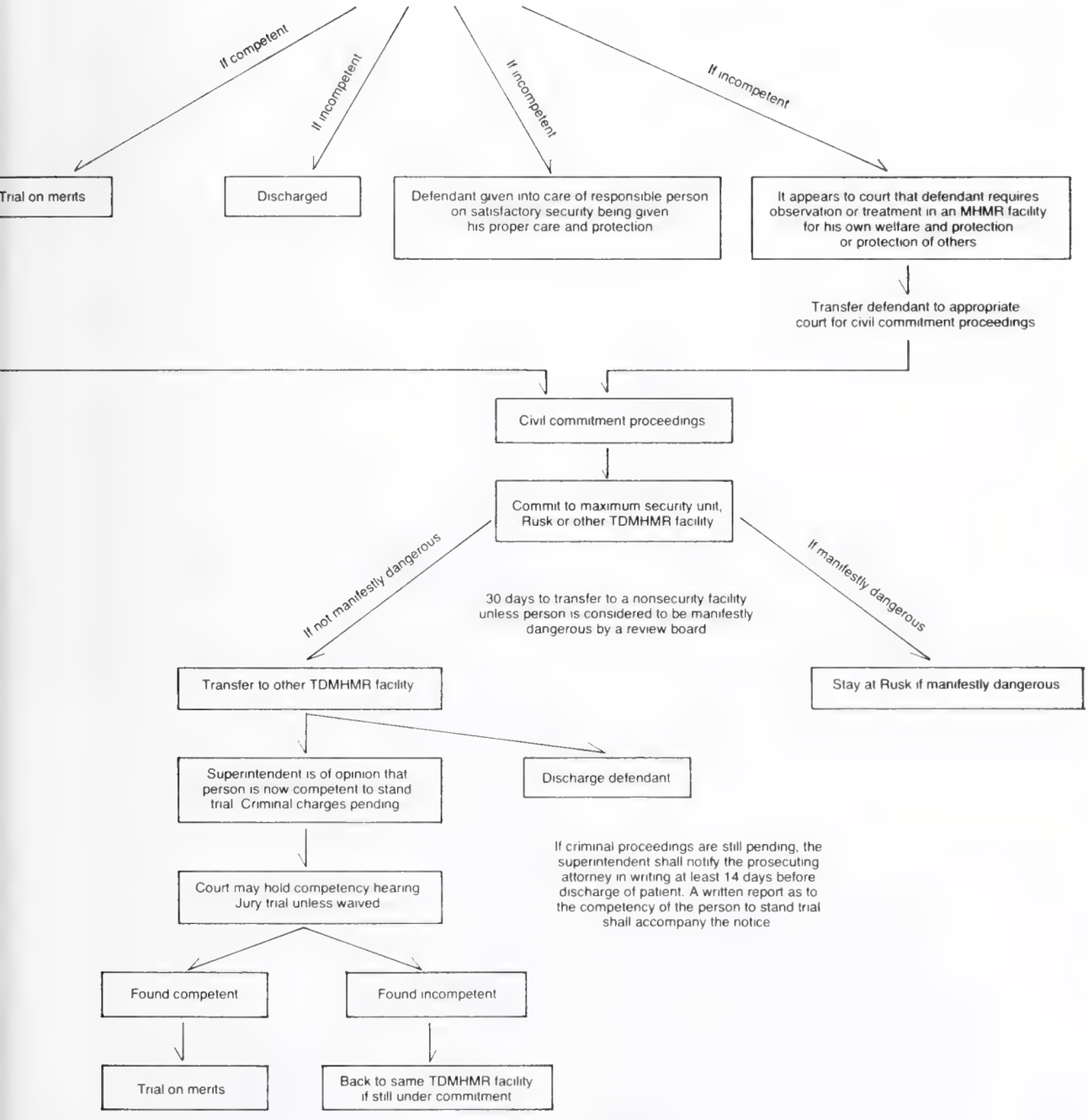
If the defendant is found to be competent to stand trial, the proceedings on the criminal charges may be continued. If the defendant is again found incompetent to stand trial and is under an order of commitment to a mental health or mental retardation facility, the court shall order him placed in the custody of the sheriff for transportation back to that same facility.

Insanity Disposition

If a defendant is found not guilty by reason of insanity in the trial of a criminal offense, and it appears to the court that the defendant requires observation or treatment in a mental health or mental retardation facility for his own welfare and protection or for the protection of others, the court shall transfer the defendant to the appropriate court for civil commitment proceedings and may order the defendant detained pending the prompt determination of whether the defendant shall be committed to a mental health or mental retardation facility, be given into the care of a responsible person on satisfactory security being given for his proper care and protection, or be discharged.

1. Flow chart showing route of a defendant whose competency to stand trial is at issue.





INCOMPETENCY TO STAND TRIAL

A person is incompetent to stand trial if he does not have:

1. Sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding;

or

2. A rational as well as factual understanding of the proceedings against him

If a person is committed to a mental health or mental retardation facility as a result of these proceedings, he shall be committed to the maximum security unit of Rusk State Hospital or the maximum security unit of any other facility designated by the Texas Department of Mental Health and Mental Retardation. Within 30 days following commitment, he shall be transferred to a nonsecurity unit of a mental health or mental retardation facility designated by the Texas Department of Mental Health and Mental Retardation unless the person is determined to be manifestly dangerous. This person may also be discharged directly from Rusk State Hospital (pursuant to Section 80 of the Texas Mental Health Code) upon 14 days notice to the prosecuting attorney of the court in which criminal charges against the patient are pending.

In the hope of trying to provide some visual clarity to this new set of procedures, flow charts of the movement of a client through the judicial and mental health systems are provided in Fig 1 and Fig 2.

Current Significant Issues

Now that this new law has been in existence for about 16 months, three significant issues seem to be drawing the most attention, concern, and confusion. These issues are the areas of competency, insanity, and dangerousness. Psychiatrists, lawyers, and judges throughout the state will be having to cope with these issues.

Competency

Competency, although not a new term in the mental health area, has found a new meaning as far as its use in the Texas Code of Criminal Procedure is concerned. As stated in Article 46.02, "A person is incompetent to stand trial if he does not have: (1) sufficient present ability to consult with his lawyer with a reasonable degree of rational understanding (*Dusky vs US 362 US 402, 1960*); or (2) a rational as well as factual understanding of the proceedings against him.

The significance of this new concept in criminal proceedings is that psychiatrists and other mental health professionals will be evaluating a person's competency, and making a determination as to the probability of his regaining competency in the foreseeable future. This represents, for many psychiatrists, a major change in the way competency is determined.[2] Before this, psychiatrists based competency evaluations on whether or not a person was actually mentally ill. This is no longer considered the best way to determine competency.

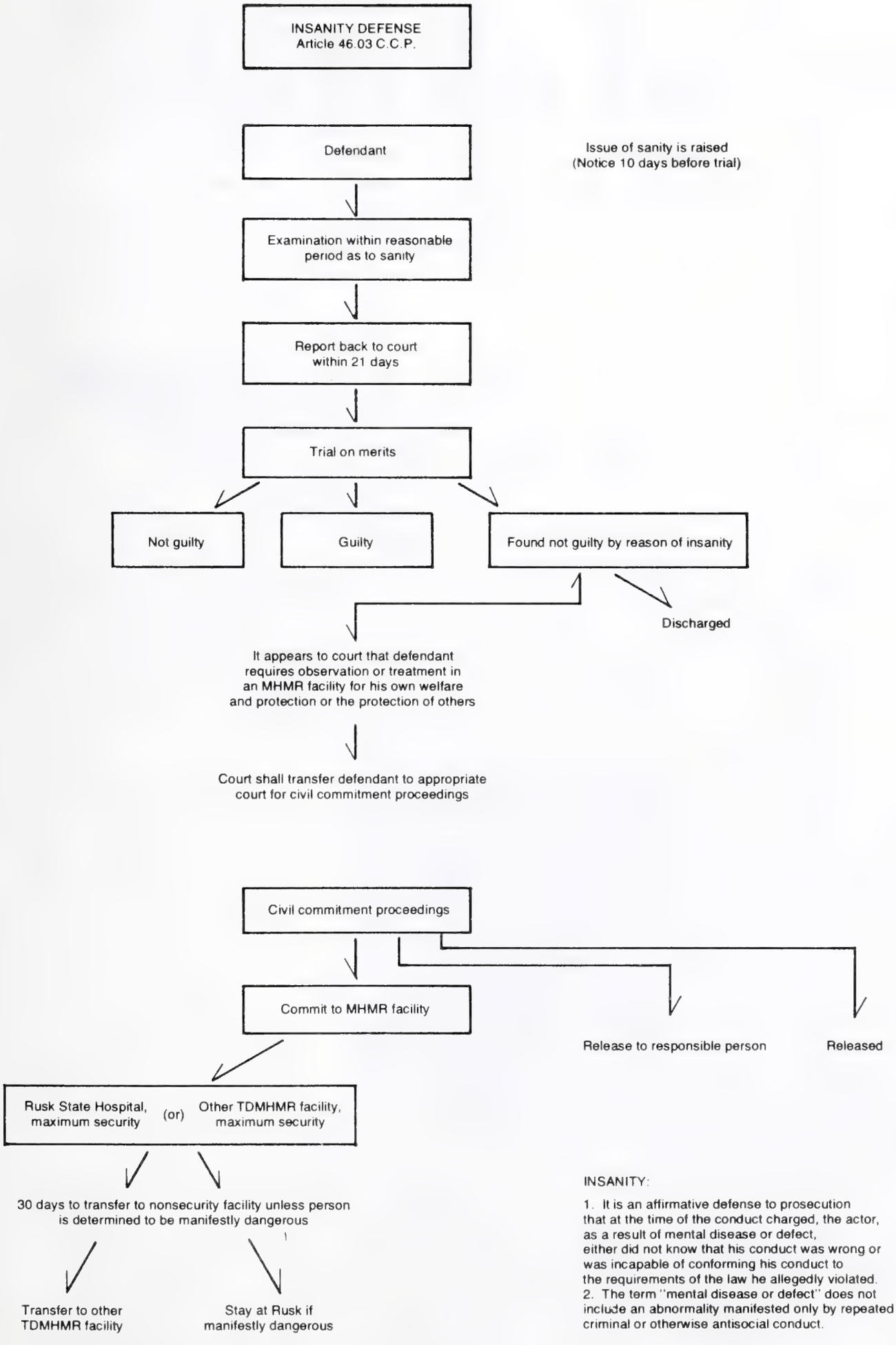
The basic issue to be clarified is that *competency*, not *sanity*, is being evaluated. If a person is able to consult with his lawyer with a reasonable degree of rational understanding, or has a rational as well as factual understanding of the proceedings against him, he must be declared competent to stand trial on the merits. His sanity in this respect is not an issue. Psychiatrists should take careful steps to see that their reports as to competency to stand trial are limited to evaluation of competency to stand trial as defined by law. A person may be suffering from a severe mental illness, such as chronic undifferentiated schizophrenia, and still understand the court proceedings and be able to advise and assist his counsel in his own defense. Therefore, he would be considered competent to stand trial.

For a handy reference on the topics of competency to stand trial, see *Competency to Stand Trial and Mental Illness*, DHEW publication No. (HSM) 73-9105, 1973.

Insanity Defense

The main issue in insanity defense is that there are numerous new procedures to be followed in the legal and mental health system when a person is found to be not

2. Flow chart for a defendant whose sanity is at issue.



guilty by reason of insanity, but *one* main issue is the relatively new definition of insanity being used in Texas. The insanity defense is defined in Section 8.01, Vernon's Annotated Texas Penal Code, as follows:

1. It is an affirmative defense to prosecution that, at the time of the conduct charged, the actor, as a result of mental disease or defect, either did not know that his conduct was wrong or was incapable of conforming his conduct to the requirements of the law he allegedly violated.

2. The term "mental disease or defect" does not include an abnormality manifested only by repeated criminal or otherwise antisocial conduct.

As with the competency determination, insanity will have to be reported to the court separately and in writing.

Manifest Dangerousness

The newest and potentially most troublesome area of the new law deals with the determination of manifest dangerousness by a review board of the Texas Department of Mental Health and Mental Retardation.

After a person has been civilly committed to the maximum security unit at Rusk State Hospital, he must be transferred to a nonsecurity unit within 30 days unless he is determined to be manifestly dangerous. If determined to be manifestly dangerous, the patient is to be detained on a maximum security unit at Rusk State Hospital, but if he is determined not to be manifestly dangerous, then he must be moved to a less restrictive environment.

At present a review board has been established within the Texas Department of Mental Health and Mental Retardation, and criteria are being developed in order to clarify the objective standards to be used in making this declaration.

Although the care of the mentally ill defendant is just one area of concern within the Texas Department of Mental Health and Mental Retardation, it is a particularly troublesome area in which there are varying and conflicting ideas. With such controversy surrounding such a class of persons, it is hoped that this new legislation will help the Texas mental health system provide more and better care and treatment while also protecting all the constitutional rights of each of the "criminally insane" patients.

It is now up to the Texas Department of Mental Health and Mental Retardation and the Texas judicial system to see that the provisions of this new legislation are carried out.

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2. McGarry AL, Schwitzgebel RK: Inter-rater reliability and a new instrument. Annual meeting, American Psychiatric Association, Dallas (May 4) 1972.

The authors, Texas Department of Mental Health and Mental Retardation, Box 12668, Capitol Station, Austin, TX 78711.

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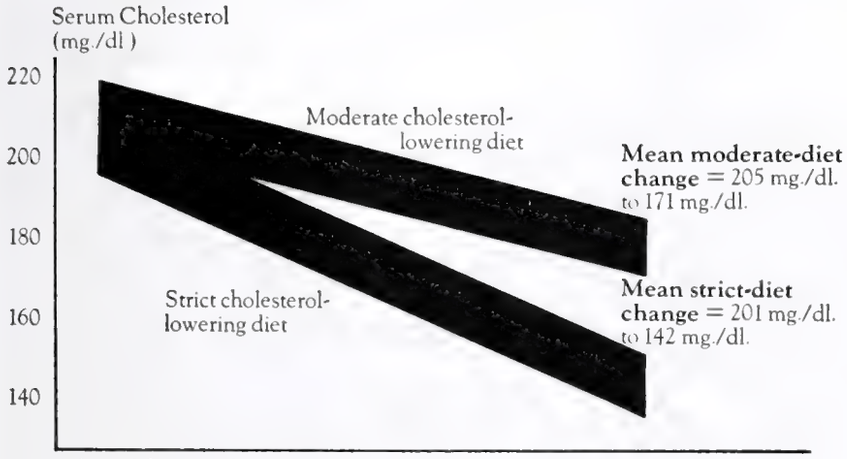

Adapted from Anderson, J.T., Grande, F., and Keys, A.: Cholesterol-lowering diets, J. Am. Diet. Assoc., 62:133, 1973.

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SATURDAY, JANUARY 15, 1977

1977 CONFERENCE ON LEGISLATION AND SOCIO-ECONOMIC ISSUES

Information on legislative issues of medical interest which will be introduced before the new Congress and the Texas Legislature in 1977.

Congressional issues which will be discussed include NATIONAL HEALTH INSURANCE, COST CONTAINMENT and COST CONTROL, and AN ASSAULT ON PROFESSIONALISM.

At the state level, attention will be focused on bills which will be designed to ease or resolve the PROFESSIONAL LIABILITY INSURANCE CRISIS, MEDICAL MANPOWER AND SUPPORT OF MORE RESIDENCIES IN FAMILY PRACTICE AND IN PRIMARY CARE FIELDS.

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BRIEF SUMMARY OF PRESCRIBING INFORMATION

*INDICATIONS. Based on a review of this drug by the National Academy of Sciences—National Research Council and/or other information, FDA has classified the indications as follows:

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Final classification of the less than effective indications requires further investigation.

CONTRAINDICATIONS. Administration of Antivert (meclizine HCl) during pregnancy or to women who may become pregnant is contraindicated in view of the teratogenic effect of the drug in rats.

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Meclizine HCl is contraindicated in individuals who have shown a previous hypersensitivity to it.

WARNINGS. Since drowsiness may, on occasion, occur with use of this drug, patients should be warned of this possibility and cautioned against driving a car or operating dangerous machinery.

Usage in Children: Clinical studies establishing safety and effectiveness in children have not been done; therefore, usage is not recommended in the pediatric age group.

Usage in Pregnancy: See "Contraindications."

ADVERSE REACTIONS. Drowsiness, dry mouth and, on rare occasions, blurred vision have been reported.

More detailed professional information available on request.

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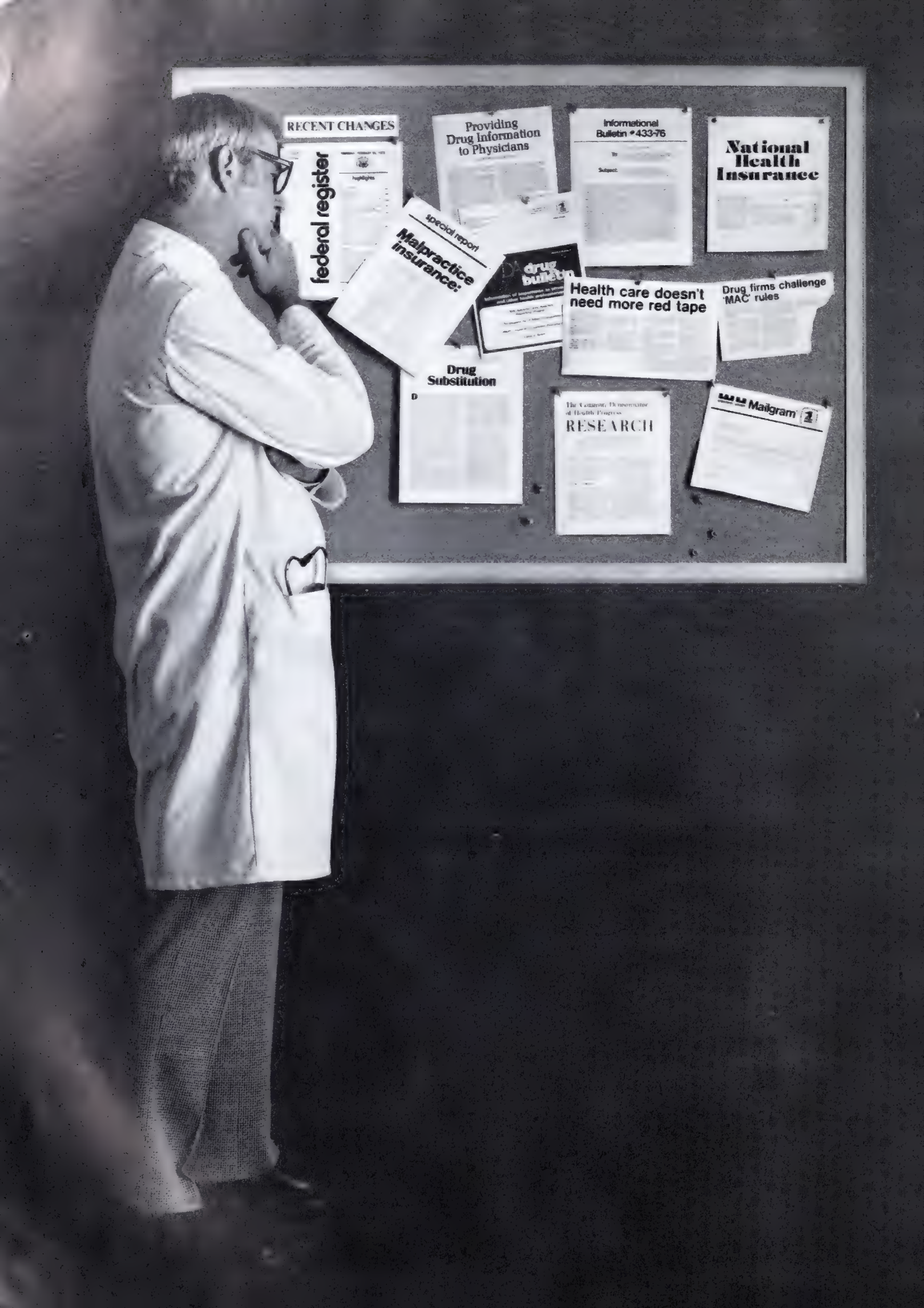
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THERE ARE A LOT OF PEOPLE GETTING BETWEEN YOU AND YOUR PATIENT.

Medicine today is in the spotlight, subjected to all kinds of scrutiny. Your control over patient therapy is being monitored, judged and occasionally abrogated, sometimes by unknown third parties.

The worry is that in the wake of this focus, the relationship between you and your patient will be weakened, without offsetting benefits. Consider three examples:

Drug substitution In most states, pharmacy laws, regulations or professional custom stipulate that your non-generic prescriptions be filled with the precise products you prescribe. But in the last five years, a dozen or more State laws have been changed, permitting the pharmacist in most cases to select a product of the same generic drug to fill any prescription.

Ironically, this dilution of physician control has taken place against a background of growing evidence that purportedly equivalent drug products may be inequivalent, since neither present drug standards nor their enforcement are optimal. In fact, the FDA itself says it has not enforced the same standards for hundreds of "follow-on" products that it had applied to the original NDA approvals. Thus physician control over patient therapy is being eroded with a risk that patients may be exposed to drugs of uncertain quality.

The major advertised claim for substitution is reduced prescription prices for consumers. Yet no documentation of any significant savings has been produced.

MAC Maximum Allowable Cost, MAC for short, is a Federal regulation designed to cut the Government's drug bill by setting price ceilings for drugs dispensed to Medicare and Medicaid patients. Unless the prescriber certifies on the prescription that a particular product is medically necessary, the Government intends to pay only for the cost of the lowest-priced, purportedly-equivalent, generally-available product. The effect of the program may be that elderly and indigent patients will be restricted to products which someone in Washington believes are priced right. Practicing doctors will have little to say about administration of the program, since Government will have absolute authority to make its choices stick.

The drug lag The future of drug and device research depends upon a scientific and regulatory environment that encourages therapeutic innovations. The American pharmaceutical industry annually is spending more than $1 billion of its own funds and evaluating more than 1,200 investigational compounds in clinical research. Disease targets include cancer, atherosclerosis, viruses and central nervous system disorders, among others. But there is a major barrier to the flow of new drugs to your patients: The cost of the research is more than ten times what it was, per product, in 1962; and whereas governmental clearance of new drug applications took six months then, it commonly consumes two years now.

The FDA needs adequate time, of course, to consider data. But it is equally clear that the present approval process contributes to needless delay of needed therapy. That's why the increased efficiency of the drug approval process is vital to all our futures.

If these issues concern you, we suggest that you make your voice heard—among your colleagues and your representatives in State legislatures and in Washington.

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Railway medicine in Galveston

Maury Darst, MA

As a port city, a center for commercial and financial activity, and the site of the state's first and largest medical school, Galveston, Texas, formed a vital nucleus for the development of railway medicine.

The city of Galveston played an active role in bringing sophistication to the era of railway medicine. Located on an island two miles off the Texas mainland, it held a position as the most important commercial and financial center of Texas until the Houston Ship Channel was completed in 1914, and served as a major port of entry for goods and immigrants into the Middle West and the Southwest. In an interview (Jan 8, 1967), J. McGivney, MD, said that Galveston's legacies are uniquely associated with hospitals and health education resources, and since 1891 it has been the home of The University of Texas Medical Branch, which has produced more physicians than any other medical school in Texas.

The Civil War brought railroads to prominence in the US. During the years immediately following that war, Galveston was dependent on the Galveston, Houston & Henderson Railroad, which had been completed in January 1860.[1 (vol 1, pp 665-666)] Although Galveston at that time was considered to be the most important city in Texas, the GH & H, her only railroad, terminated in Houston, where most of her transport business originated. When yellow fever became an annual epidemic along the Gulf Coast, Houston, using an enabling act of the Texas Legislature which permitted counties to place an embargo on goods from infected sources, quarantined all commercial and passenger traffic to and from the island.[2] With trade paralyzed, Galvestonians convinced business leaders to build a railroad that would bypass its neighbor by some 24 miles;[3 (pp 212-216)] it was strictly a Galveston enterprise. Its route from the Gulf of Mexico north through Rosenberg and Temple, the site of the Santa Fe Memorial Hospital and the Scott and White Clinic, was influenced by wealth, or the lack thereof, political controversy, and human health. Although Galveston would eventually be served by other railroads, the founding of the Gulf, Colorado and Santa Fe can be considered in part the sequel to yellow fever.

Galveston, then a community of 18,000 people, was ravaged by a yellow fever epidemic during the summer months of 1867,[4] the same year the Sisters of the Incarnate Word opened St Mary's Infirmary, the first private hospital in Texas. More than 5% of the population died, and Houstonians, fearful that goods shipped north from the island might transmit the poorly understood disease, enacted their embargoes. Thus, the "yellow fever" quarantines adopted by Houston and Harris County caused the reaction which set off organization of the Gulf, Colorado & Santa Fe Railway.

The GC & SF was created by an act of the Texas Legislature on May 28, 1873. Construction began on May 1, 1875 and reached Richmond by 1879, when financial difficulties forced foreclosure. At that time John Sealy, a prominent Galvestonian, bought the line and reorganized it under the same name.[1 (vol 1, p 476)] Other men associated with this endeavor were Col W. L. Moody, H. Kempner, Morris Lasker and John Henry Hutchings.

The Sealys, Kempners, and Moodys were heavily engaged in the financial and commercial trade of the city. Lasker was a native of Prussia and moved to Galveston after the Civil War. The Morris Lasker Educational Fund at The University of Texas is named in his honor. His son, the late Albert

Lasker of New York, is often referred to as the "father of modern advertising." The Albert Lasker Medical Research Awards have recognized many individuals who have made outstanding contributions to the medical and health fields.[1 (vol 2, p 34)] In 1886 the Atchison, Topeka & Santa Fe purchased the Galveston-sponsored line at a valuation of $8,000 per mile, payable in stock.[1 (vol 1, p 746)]

The Santa Fe was one of the first railroads to adopt a system-wide hospitalization and pension plan. Employees at Galveston were given the services of local surgeons and access to both St Mary's Infirmary and John Sealy Hospital on an emergency basis. The Santa Fe Hospital at Temple was always available for illnesses and injuries not of an emergency nature, according to a letter from L. M. Rampy (October 1973). That hospital had had its beginnings in Galveston with formation of the Santa Fe Hospital Association, although the hospital itself was established in Temple. Dr Arthur Carroll Scott, a native of Gainesville, Tex, became chief surgeon in 1892; two years later he appointed as house surgeon Dr Raleigh R. White, a graduate of Tulane University.[1 (vol 2, pp 581-582)]

A pension plan, established by the parent company Dec 12, 1906, provided employees who had 15 years of service or more with a monthly pension ranging from $25 to $75 or more per month when they reached 65 years of age or became unable to work, regardless of age. Within 30 years the Santa Fe had paid out more than $11,000,000 in pensions, without a single contribution from its employees. The railroad also established a death benefit system, under which dependents received a lump sum ranging from $250 to $3,000, depending on the employee's length of service and rate of pay. The railroad deducted nothing from the salaries and paid all costs.[3 (pp 292-294)] Under the Social Security Act of 1935 and subsequent federal legislation, the Santa Fe was eventually forced to abandon its system in favor of a governmental retirement plan.

In 1894, Galveston gave strong support to the seventh annual meeting of the National Association of Railway Surgeons held May 8-11.[5]

In Galveston, as in most railroad communities, railroad physicians and surgeons served with distinction. Galveston, with its medical college, furnished many railroads with graduates who made significant contributions to the field of medicine and health care. For example, a Santa Fe physician at Galveston, Dr George William Nordholtz Eggers, received international recognition for his research, especially for the Eggers splint which he designed.[6]

Following somewhat later than the larger lines, the Galveston, Houston & Henderson Railroad arranged with the Missouri State Life Insurance Company of St. Louis for all employees who had completed six months or more of continuous service to obtain the benefits, and accident and sickness insurance at low rates and without medical examinations. The insurance package became effective on Sept 28, 1928. In determining the amounts of insurance each employee was allowed to purchase, workers were divided into three categories according to annual earnings. The monthly combined cost ranged from $2.15 per month for those earning $1,500 annually, to $5.25 per month for those earning $3,000 per year. Although company records make no reference to previous medical or health care plans, a chief surgeon designated by the GH & H took care of major

medical and surgical cases at local hospitals.[7]

In 1885 the International and Great Northern (Missouri Pacific) and the Missouri, Kansas & Texas (Katy) Railroads obtained an outlet to the sea by leasing the tracks of the GH & H between Houston and Galveston, each holding $500,000 of the stock. The arrangement is still in effect.[8] In a letter (July 1973), H. E. Hammer noted that the Missouri Pacific and the Katy Railroads did not have designated medical officers in Galveston, and there were never any arrangements with local hospitals for health care.

In 1899 the Southern Pacific entered Galveston after purchasing the Galveston, Houston & Northern Railway. This eventually led to the first shipside interchange of freight from railroad cars to steamships belonging to the Southern Pacific Steamship Company.[9] Employees of the Southern Pacific in Texas and Louisiana were required to be members of the Southern Pacific Hospital Association. The association was administered by a board of managers, composed of both managerial and employee personnel, who were elected once every two years by the membership. A May 1973 letter from J. R. Gandy, MD, stated that the association maintained the Southern Pacific Hospital in Houston, where all elective surgery and medical workups were performed.

Local physicians and surgeons were given passes over all Southern Pacific lines, as well as certain foreign systems, depending on the requirements of the railroad. Compensation for such services was determined on an individual basis in each community. The physicians at Galveston were the late Dr William B. Fisher and Drs John R. Delaney, Edward Thompson, Jr, and Albert O. Singleton, Jr, who treated emergency problems such as acute injuries or illnesses, occurring either on or off duty. The Hospital Association paid the bills for any hospitalization, and drugs required for treatment were furnished by the group at no cost to the patient, Dr Gandy recalled.

Even with such medical benefits and elaborate safety campaigns, carelessness continued to plague the railroad, sometimes resulting in fatal accidents. The editor of the *Southern Pacific Bulletin* in 1936 mused, "... if every Southern Pacific employee will cultivate a habit of self-examination and conscientiously apply himself to the avoidance of potential accidents ... it is safe to predict there will be a decrease in both reportable and non-reportable casualties on these lines."[10]

Employees of the Galveston Wharves Terminal Railway, operated by the Port of Galveston, became participants in a company hospital plan established in 1916 by the then privately-owned Galveston Wharf Company. Although records relating to the rules and regulations of the original fund have been destroyed, contributions were collected through payroll deductions. By June 1944, after the Wharf Company had been purchased by the City of Galveston, the plan continued to operate under its original guidelines. A minimum of $1 per month was deducted from the earnings of all officers and employees of the company who had earned more than three days' pay, except laborers on weekly payrolls who were assessed $.25 per week. Treatment was provided at St Mary's Infirmary by the chief surgeon, Dr E. S. McLarty, Sr. Other clinics or hospitals could be used on an emergency basis, but only with the approval of Dr. McLarty or the Port General Manager.[1 (p iii)]

In 1948 the amount assessed was increased to $3 per month and $.75 for

weekly laborers, after it was learned that the fund had operated at a net loss of $4,482 from April 1 to Sept 30, 1948. On Jan 1, 1972, the arrangement was discontinued and the Galveston Wharves Employees Hospital Association, an organization completely independent from port management, became effective. Supervised by a board of directors consisting of Port of Galveston employees, the group continues to offer complete medical services and pays all expenses except those for eye examinations. Prescriptions are issued by the chief surgeon and filled at a designated drug store at no cost to the patient.[11 (pp 3-8)]

The Galveston Terminal Company was chartered in 1905 to acquire, build, and operate freight facilities at Galveston for the Chicago, Burlington & Quincy, the Chicago, Rock Island & Gulf (Pacific), the St Louis & San Francisco (Frisco), and the Trinity & Brazos Valley Railroads. Under this arrangement the firm, as strictly a switching railroad, constructed a depot and some 15 miles of track along the Galveston waterfront.[1 (vol 1, p 667)] Employees of the terminal company were required to pay monthly dues to the Burlington-Rock Island Hospital Association, under which all medical expenses were paid. Hospital services, supervised by a company-appointed physician, were available through local clinics and hospitals, as related by P. A. Gavronovic in an interview in October 1973.

The most unique "railroad" connecting Galveston and Houston was a 50.5-mile electric interurban constructed in 1911 by the Stone and Webster Engineering Corporation of Boston.[12] Standard railway rules and regulations were modified to suit interurban operation, and motormen and conductors were carefully selected and trained for their jobs. Trainmen were not permitted to smoke or drink on the job, and gambling, while not necessarily a safety hazard, was prohibited on all company property. Medical services were available through physicians in both Houston and Galveston. In an October 1973 interview, R. E. Bowen recalled that the line was abandoned in 1936, with workers transferred to Stone and Webster bus operations in the two cities.

Galveston, as a terminus for several railroads, involved itself heavily in health care and the legacies of railway medicine. It is a heritage Galveston continues as the nation nears the climax of its bicentennial year.

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Dr. Isaac M. Cline (1861–1955): meteorologist, physician

Frederick Sargent II, MD

When Isaac Monroe Cline came to Texas in 1885, a few physicians were writing about weather and disease but the Texas Medical Association had abandoned serious interest in the subject. Its Committee on Climatology and Epidemics, organized in 1869, had ceased to function in 1879. Cline, a physician and a meteorologist with the Army Signal Corps, was destined to become director of the Texas Section of the US Weather Service and a lecturer in medical climatology at The University of Texas Medical Branch. His medical meteorological studies there demonstrated that the mortality from a particular disease waxed and waned according to a particular pattern of weather changes. It is the story of this original contribution that shall be our focus.*

Medical Meteorology in Texas

During the colonial period there was in America a lively interest in medical meteorology among physicians and laymen.[1] Such names as John Lining, Lionel Chalmers, Hugh Williamson, William Currie, Benjamin Rush and Noah Webster come readily to mind. It was the remarkable layman Noah Webster who dreamed the dream of worldwide meteorological and vital data conceived in the 17th century by the Englishmen Boyle, Locke and Wren. Deriving from such a vigorous tradition as set by these men, it is not surprising that early Texas physicians should be concerned with weather and disease. The tools were now in hand to measure the atmosphere, gauge physiological processes, and count illness and disease. Although still imperfect, the methods were sufficiently accurate to test the old idea that weather influenced human illness.

That there was, initially at least, a keen interest in the relation between weather and disease was demonstrated when the Texas Medical Association was reorganized in 1869. Then the first committees were established and the association began to address the problems of etiology, treatment, and prevention of disease. Of the two committees dealing with scientific matters, one was the Committee on Climatology and Epidemics. Although we cannot be certain what duties had been assigned because no charges were ever published, in retrospect it appeared that medical meteorological intelligence was at least one of its tasks. Many distinguished Texas physicians served with this committee: G. Cupples, T. J. Heard, W. D. Kelly, J. H. Sears, R. M. Swearingen, and D. R. Wallace became presidents of the Association.

From the start the members of the committee sought the assistance of their colleagues in collecting observations on weather and disease, and they repeated this plea on several occasions for the next ten years. At first their success was not great,[2] and in 1875 the chairman recommended that every county organize a medical society and that each society charge a sanitary committee with the responsibility for systematically collecting meteorological data and accounts of epidemic diseases.[3] Brief reports from a number of counties were published in the TMA transactions in 1875 and 1876, and meteorological tables which had begun to appear in 1871 without comment or interpretation continued. Chairman E. Palmer, in 1877, concluded that "application of sanitary laws" could enable man *"to modify and*

* The perspective and the interpretation of the history of medical meteorology presented in this article about Dr Cline derive from material collected by the author for a book, *Hippocratic Heritage*, now in preparation.

govern a climate" and thus control or moderate the effects of epidemics.[4] J. R. Robertson, one of the members, stressed the value of climatic treatment of disease.[5] This point was reasonable, for at this period medical climatology was a thriving specialty and there were available numerous treatises, handbooks, and monographs on the subject. Among the more notable from American presses were Dunglison's *Elements of Hygiene,*[6] Drake's *A Systematic Treatise, Historical, Etiological, and Practical, on the Principal Diseases of the Interior Valley of North America,*[7,8] and Disturnell's *Influence of Climate in North and South America.*[9]

Palmer's paper, however, signaled a change in viewpoint, the seeds of which may have been laid a year earlier in Pope's "Report on the Science and Progress of Medicine."[10] In this report, Pope emphasized that "The theory of *contagium virum* as the cause of acute Infectious Diseases is constantly gaining favor." He urged that in order to unravel the nature of epidemic disease and develop quarantine and sanitary laws to control and prevent it, one should carefully observe in every locality the waxing, spreading, and waning of epidemics. Bibb's essay, "Preventive Medicine," revealed a similar trend of the thinking the next year.[11] Bibb proposed that preventive medicine concern itself with the causes of disease and preservation of health "by rendering harmless these causes." Although sanitary legislation was useful, health education was the most important strategy of preventive medicine. Conspicuous by its absence was any reference to medical meteorology by either Pope or Bibb.

In 1877 the association made changes in the constitution and by-laws.[12] The record is not clear about just what these changes were, but I suggest they involved moving in directions reflected in the papers by Palmer, Pope and Bibb. Thus, we find that in his report of 1878, Chairman J. H. Sears called for enactment of sanitary laws and advocated draining swamps and other bodies of stagnant water.[13] Most notably, however, Sears apologized for the paucity of medical meteorological intelligence. It was simply a task greater than his five-man committee could accomplish. As a consequence, in that year the association enlarged the Committee on Climatology and Epidemics to assure surveillance of all parts of the state. T. D. Wooten was appointed chairman and 24 members were named, each representing a different "judicial district."[14]

This expanded committee made "no report" in 1879.[15] In fact, the transactions of this year contained the last reference to the Committee on Climatology and Epidemics, and reported the creation of a Committee on State Medicine and Public Health. If the changes planned in 1877 were to be implemented in 1879, why did the association appoint such a large committee in 1878 only to abandon it in 1879? The record is mute, but I surmise that there was dissatisfaction with its activities and a swing of interest from medical meteorology to sanitation, public health, and preventive medicine based on the theory of specific contagion as the cause of epidemic disease.

In this early period of Texas' history there were two physicians who published notable papers on medical meteorological matters. Ashbel Smith, long a student of yellow fever, wrote "An Account of the Yellow Fever Which Appeared in the City of Galveston, Republic of Texas, in the Autumn of 1839, with Cases and Dissections."[16] While contending that the disease

was not communicable between persons, Smith believed that it arose from exposure to an infected district. Among the features of such a district were "dense population, unacclimated people, and proximity to stagnant water." He also listed general causes—"ardent sun, a prevalence of northerly winds, and a highly electrical condition of the atmosphere"—as being contributory. T. J. Heard, a student of epidemic disease, became professor of theory and practice of medicine at Galveston Medical College in 1868. In that year he published "Report on Medical Topography, Meteorology, and Epidemic Diseases of Texas."[17] This report, devoted principally to a discussion of yellow fever in Galveston, contained geographical, meteorological and vital data as well as a survey of diseases prevalent in Texas between 1840 and 1850. Heard's ideas of etiology were consistent with those of the times—putrid atmospheric constitution, unseasonable weather, and miasma.

Two other publications should be mentioned in passing, for one dealt with the presumed debilitating effects of residence in hot climates and the other provided an early observation about the effects on health of a wind we now call the "blue norther." After six years of duty in the Army Medical Corps "under the poisonous influence of malaria in the swamps of Louisiana and the exhausting heats of the lower Rio Grande" (Ringgold Barracks), Harvey[18] concluded from Fort Preble that northern natives were incapable of adapting to a hot climate. Harvey spoke in the spirit of the time and, even though Jousset[19] concluded otherwise, it was not until the 20th century that medical scientists had sorted out from the effects of heat those of tropical diseases.[20,21] Stout reported on climatic influences in northwestern Texas.[22] His paper directed "attention to those climatic conditions and those modes of living which, violating the laws of hygiene, often provoked diseases."[22 (p 110)] One observation, incriminated abrupt weather change, for instance, sudden shifts from northerly to southerly winds, as cause of disease. The norther was held responsible for the death of Stephen F. Austin.[16 (pp 292-293)] Indeed, its reputation for provoking illness persists down to the present, for in one Texas city "admitting personnel . . . have learned to provide additional beds for expected 'coronaries' whenever the local weather bureau forecasts a blue norther."[23 (p 479)]

Texas physicians were certainly familiar with medical meteorology. The raw material for discovery was in hand. There were meteorological observations, many of them actually made by physicians, and data on morbidity and mortality. Although some physicians were already perceptively linking weather and disease, the Committee on Climatology and Epidemics failed to kindle wide interest in the relation of man's health to his air environment and the official viewpoint swung from medical meteorology to specific contagion.

Isaac Monroe Cline

Without apparently ever realizing it, Cline followed the advice of Hippocrates: He studied meteorology before he trained for medicine. This man was born near Madisonville, Tenn, on Oct 13, 1861. His early education was in local public schools. At 16, Cline entered Hiwassee College and majored in meteorology and civil engineering. After graduating in 1882, he was appointed to the weather training program of the Air Signal Corps at Ft Myer, Virginia. Upon completing this pro-

gram he became an assistant weather observer at Little Rock, Ark. What prompted his curiosity about weather and disease is not known, but while in Little Rock he determined to study the relation between medicine and meteorology. Having made this decision he attended, when not on duty, the University of Arkansas and earned the MD degree in 1885. In this same year Hiwassee College granted him the AM degree.

Now a meteorologist-physician, Cline was given the responsibility of building a First Order Weather Station at Abilene, Tex, in the fall of 1885. It was there that he met Cora May Bellew, whom he married in 1887. In 1889, when the Texas Legislature failed to create a Texas Weather Service, the Signal Corps established a Texas Section of the US Weather Service with headquarters in Galveston. Cline was appointed director and moved there in 1889. He continued in this capacity after 1891 when the US Weather Service was transferred to the US Department of Agriculture.

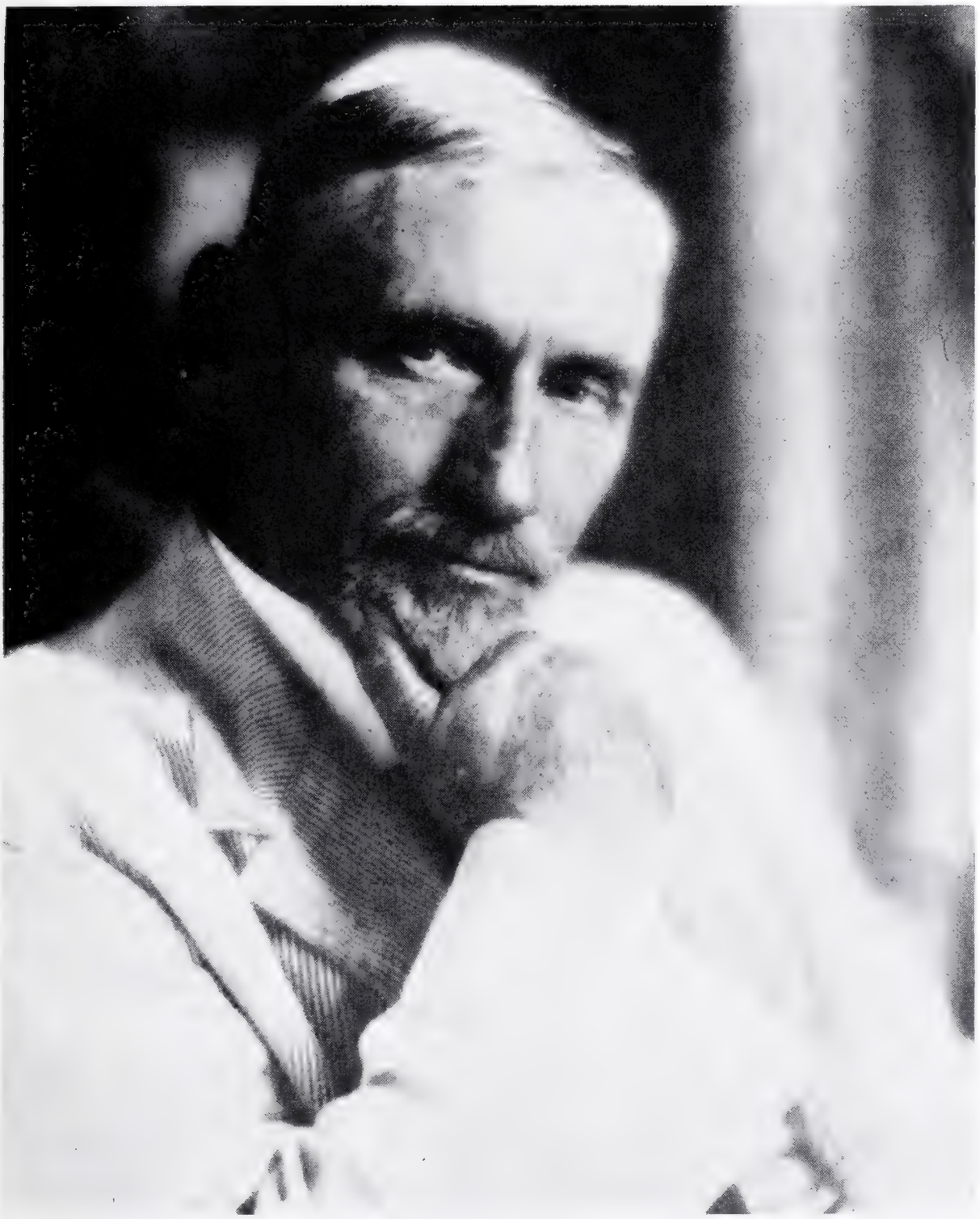
It was in Galveston that Cline began serious medical-meteorological investigations. Between 1896 and 1901, when he was transferred to New Orleans, he was lecturer in medical climatology at The University of Texas Medical Branch. His research focused on how weather changes affected persons suffering from a variety of diseases. When writing his autobiography some years later he observed, " . . . so far as I know no other medical college had taken up the study of Medical Climatology."[24 (p 65)] Apparently he was hard at work on a book about weather and health growing out of his lectures, for he noted "My course of instruction was ready for publication in book form when it was washed away in the hurricane of 1900."[24 (p 65)] He published only three papers on medical meteorology—and they seem to be little known; two dealt with seasonal changes in mortality, effects of temperature change on mortality, and a pathological classification of the US climate, [26,27] and one dealt with effects of climatic and weather changes on the functions of the skin.[28]

He joined the Texas Medical Association in 1898 and continued his membership until 1903. Between 1898 and 1901 he was the chairman and only member of a Committee on Texas Climatology. The transactions make no mention of any activities of this one-man committee.

In his spare time he matriculated at Add Ran (now Texas Christian) University where he studied philosophy and sociology under Dr J. W. Lowber, president. In 1896 he was awarded the PhD degree.

The Galveston hurricane of Sept 8, 1900, which he accurately forecasted, changed his life. He survived the storm, but his wife was drowned. He saved the lives of his brother and of his three daughters. This storm aroused a deep interest in tropical cyclones and he dropped the study of medical climatology to devote his full attention to them. He concluded that even though very few doctors were equipped to undertake medical meteorological research, he could be of greater service to his fellow men by studying and forecasting tropical cycles.[24 (pp 103-104)]

This indictment of medical meteorology was hardly justified, for important works were continuing to appear. The English translation of the three volumes of A. Hirsch's *Handbook of Geographical and Historical Pathology* was available,[29] H. Weber was writing about treatment of disease by climate in Von Ziemssen's *Handbook of General Therapeutics*,[30] and E.



1. Isaac Monroe Cline, chief of the Gulf Coast Forecast Center, New Orleans. (Photograph provided through courtesy of National Oceanic and Atmospheric Administration.)

Solly had published the first definitive *Medical Climatology*.[31] The American Climatological and Clinical Association was founded in 1884, and its transactions were published annually.[32] And most importantly, and rivaling Cline's own medical meteorological investigations, was S. W. Mitchell's classic study of the weather sensitivity in a patient with traumatic neuralgia.[33] There were even papers from the pens of Texas physicians—Beall, Walker and Capps,[34] Knox,[35] Littlejohn,[36] and Tate[38]—on these matters.

In 1901 Cline was transferred to New Orleans, La, where he became chief of the Gulf Coast Forecast Center. There he did outstanding work in forecasting floods, tropical storms, and hurricanes (Fig 1). His book, *Tropical Cyclones*, was published by The Macmillan Co in 1926. Tulane University, in 1934, awarded him a DSc degree, and he was president of the American Meteorological Society in 1934-1935. In December 1935, he retired from the US Weather Service after 53½ years. After retirement from the US Weather Service, he devoted himself to antiques and for many years operated "The Art House —Dr. Cline" in the French Quarter of New Orleans. He died Aug 5, 1955, at the age of 94 years.

Cline on Weather and Health

In 1894-1895 Cline made two fundamental contributions to medical meteorology.[26,27] He was the first medical scientist to demonstrate numerically† and graphically that disease was meteorotropic. Based on his interpretation of this finding, he prepared a map of the pathological climates of the United States. Even though his demonstration of meteorotropy marked a turning point in the history of medical meteorology, his publications were little known. For example, Cline's work was unrecognized in de Rudder's *Wetter and Jahreszeit als Krankheitfaktoren*[39] or his *Grundriss einer Meteorobiologie des Menschen*,[40] two editions of a basic text in medical meteorology. To be sure, knowledge of the influence of weather and season on disease was well known even to physicians of antiquity. They did not measure and count. One man seems to have come close to anticipating Cline. In 1885 Weber wrote, "A mere glance at the health and mortality statistics for different seasons, and under different weather conditions, shows the influence of different climatic factors on the state of health of the population, and the different seasons represent to a certain extent different climates."[30 (p 4)] Weber noted that different combinations of temperature influenced prevalence of different diseases. Thus, for example, rheumatic afflictions and respiratory diseases prevail when the weather is moderately cool, humid, and changeable, and when the weather is cold and dry apoplexy becomes more frequent among the aged. An examination of Weber's papers suggests that all he ever did was merely "glance at the statistics." He seemed never to have taken the step Cline did.

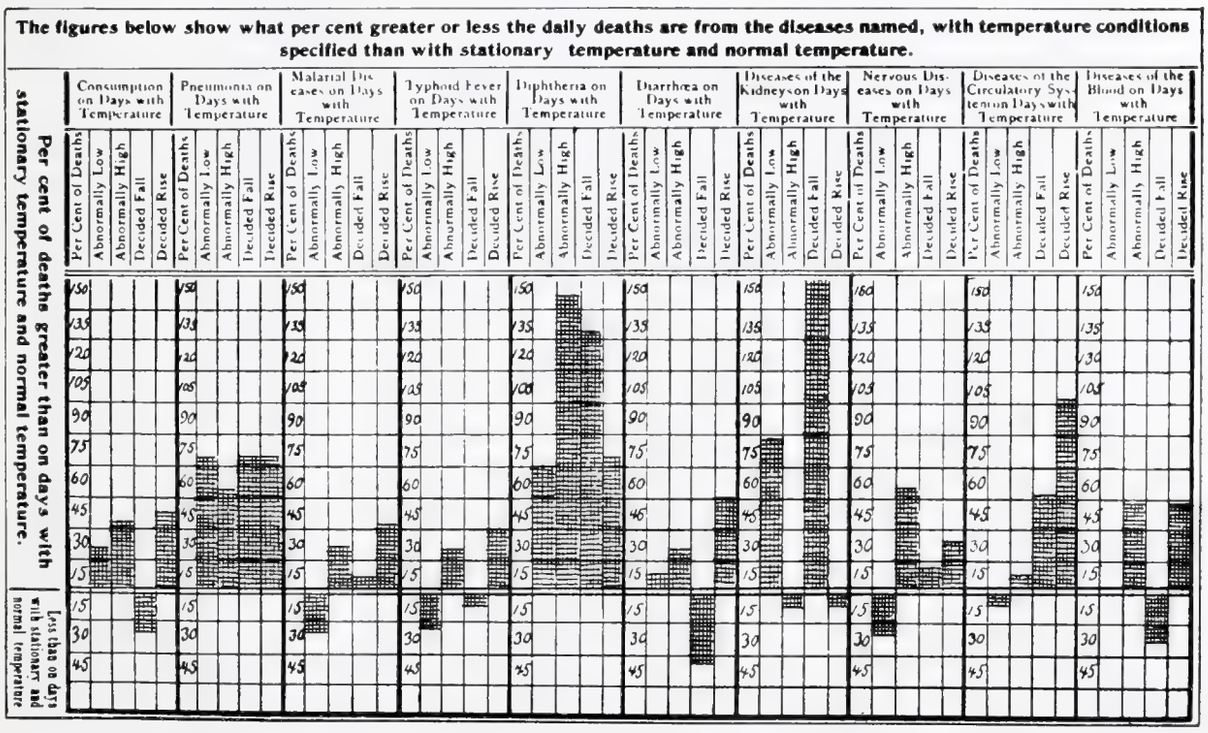
How did Cline proceed to demonstrate meteorotropy? He set out to study how daily temperature changes affected the mortality from such conditions as consumption, pneumonia, malaria fever, typhoid fever, diphtheria, diarrhea, diseases of the kidney, nervous diseases, diseases of the circulatory system, and dis-

† One cannot say "statistically" here for the appropriate statistical tests had not yet been developed.

eases of the blood. His data on mortality derived from Galveston for a 20-year period, from St Louis 5 years, and "from Houston and other places in Texas" a few years. The daily deaths from each of these ten conditions were arranged into five groups: days with stationary air temperature (less than 4° change or mean temperature within 4° of normal), days with a decided rise or fall (change of more than 4°), and days with abnormally high or low air temperature (mean daily temperature at least 8° above normal or daily excess or deficit of 5° or more for four or more consecutive days). He then expressed the mortality for each of the four groups where the temperature had changed decidedly or had been abnormal as a per cent of the mortality when the temperature had been stationary. Because large populations were involved, he assumed that mortality bore a constant proportion to the cases of illness from a particular disease. Thus, he was able to make "very accurate studies" of the meteorological conditions "favorable to the course of the disease" from illness to death.

The results of Cline's calculations are displayed in Fig 2. It is at once evident that the pattern of response of mortality to temperature change is different for each of the ten conditions. For example, deaths from pneumonia are equally elevated when the temperature is low or changing up or down, and lowest when the temperature is high. Diarrhea decreases when the temperature falls and increases when the temperature rises. The diseases of the kidney are equally low when there are warm days and days with rising temperatures, but the mortality is maximal when there is a decided fall in temperature.

2. Cline's meteorotropisms.[27 (p 108)] (Published with permission of Texas Medical Association and American Meteorological Association.)

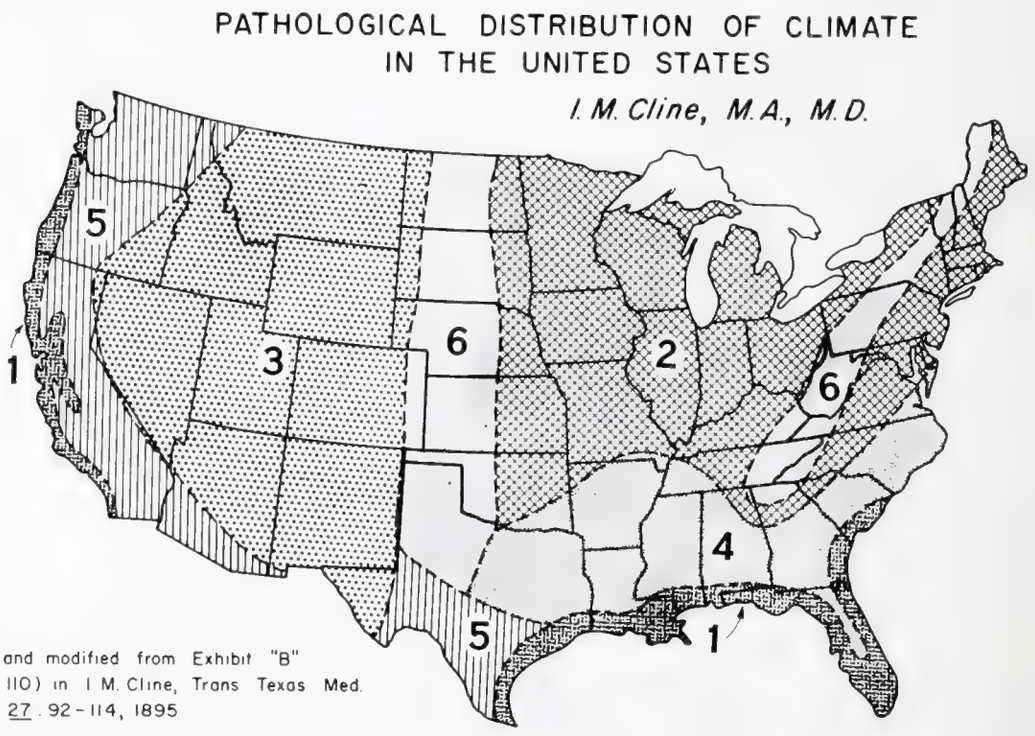


The mortality from diseases of the circulatory system are minimal when the weather is unusually cold and greatest when there are decided rises of temperature.

These meteorotropisms are most intriguing and many have been confirmed by modern statistical analysis. As they stand as of 1894 they are difficult to evaluate because Cline provides us with little information on the frequency of the different types of temperature change and no information about the variance in the mortality from the ten conditions. Thus, while change of 100% or more may well be statistically significant, a change of 50% or less may not. We cannot fault Cline on this matter, for the appropriate tools were not available.

Drawing inferences from this study and from his knowledge of the regional climatology of the United States, Cline then prepared a map showing the pathological distribution of climate. Fig 3 is Cline's map redrawn and annotated with the diseases

3. Cline's pathological distribution of climate in the United States. Redrawn and modified from I. M. Cline.[27] (Published with permission of Texas Medical Association and American Meteorological Association.)



Drawn and modified from Exhibit "B" (opp p. 110) in I M. Cline, Trans Texas Med. Assn, 27. 92-114, 1895

1. LOW, DAMP, WARM

Exhilirating, low mortality. Aggrevates renal, hepatic, skin disease. Prophylactic for gastric, bowel disorders, rheumatism, tuberculosis, general debility.

2. LOW, DAMP, COLD

Highest mortality from respiratory, circulatory, nervous, renal diseases, typhoid fever, diphtheria, diarreal disease, maladies of old age

3. HIGH, DRY

Prophylactic for respiratory, renal, rheumatic ailments, aggrevates nervous and cardiovascular conditions.

4. INTERMEDIATE (Between 1 & 2) Malarial diseases

5. INTERMEDIATE (Between 1 & 3)

6. INTERMEDIATE (Between 2 & 3)

he considered to be peculiar to each region. This distribution of diseases, Cline stated[27 (p 109)] "agrees with the distribution of deaths from these diseases given in the United States Census reports." Although not the first attempt at medical cartography,[41] Cline's map is the earliest that I have located for the United States. This map is reminiscent of Petersen's more recent demonstration of the geographical distribution of disease in the US.[42] Petersen sees in that distribution the "footprint of Æsculapius." The three foci of high mortality are the northwest (the heel), the north central (the ball), and the northeast (the toes).

Epilogue

In the years since Cline's investigations, medical meteorology has moved in two principal directions: statistical and experimental. Cline's work actually marked the beginnings of statistical medical meteorology. In time the reliability of vital data improved and information became available on more precisely diagnosed causes of death as well as various illnesses. Concurrently the sophistication of measuring weather not only at the ground level but up through the troposphere increased. Medical scientists then moved from correlating single weather factors with vital data to weather types based on knowledge of meteorological processes going on up through the atmosphere. Meteorotropic indices were calculated and short-term medical meteorological forecasts made. On the basis of statistical studies, the German Weather Service, for example, now issues daily advisory forecasts to practicing physicians.[43,46]

On the experimental side, chambers have been constructed in which various meteorological factors can be maintained at desired levels or varied to simulate weather phenomena. Exposure of human volunteers to these controlled conditions has advanced understanding of thermoregulation, acclimatization, and other physiological functions. The incidence of most of the heat diseases (for example, miliaria, heat cramps, and heat exhaustion) has been reproduced experimentally.[43] Such understanding has led to an appreciable reduction in heat-generated illness among industrial workers, military personnel, and athletes.[47] Exposure of patients with heart disease to a hot atmosphere has increased knowledge of the dynamics of heart failure.[48] The weather sensitivity of the arthritic to an approaching storm has been confirmed in the climatic chamber.[49]

Cline did not anticipate these advances, but his work, particularly in retrospect, was a major milestone along the long road from observation to measurement and finally to experimental confirmation. He drew on data and employed tools no more sophisticated than those available to the members of the Committee on Climatology and Epidemics, yet alone he accomplished in a year or so what even a 24-man committee had been unable to tackle. Insofar as this committee was concerned, perhaps he was correct when he observed, "Very few members of the medical profession are equipped to carry forward researches of this nature." However, in relation to physicians generally he was wrong. Cline, as we pointed out earlier, was surprisingly unaware of the extent of literature on medical meteorology. Whatever his criteria for "research of this nature" may have been, earlier workers had made important observations. Another significant fact that Cline overlooked

was that the Army Medical Department was responsible for founding the first organized weather service in the United States.[50]

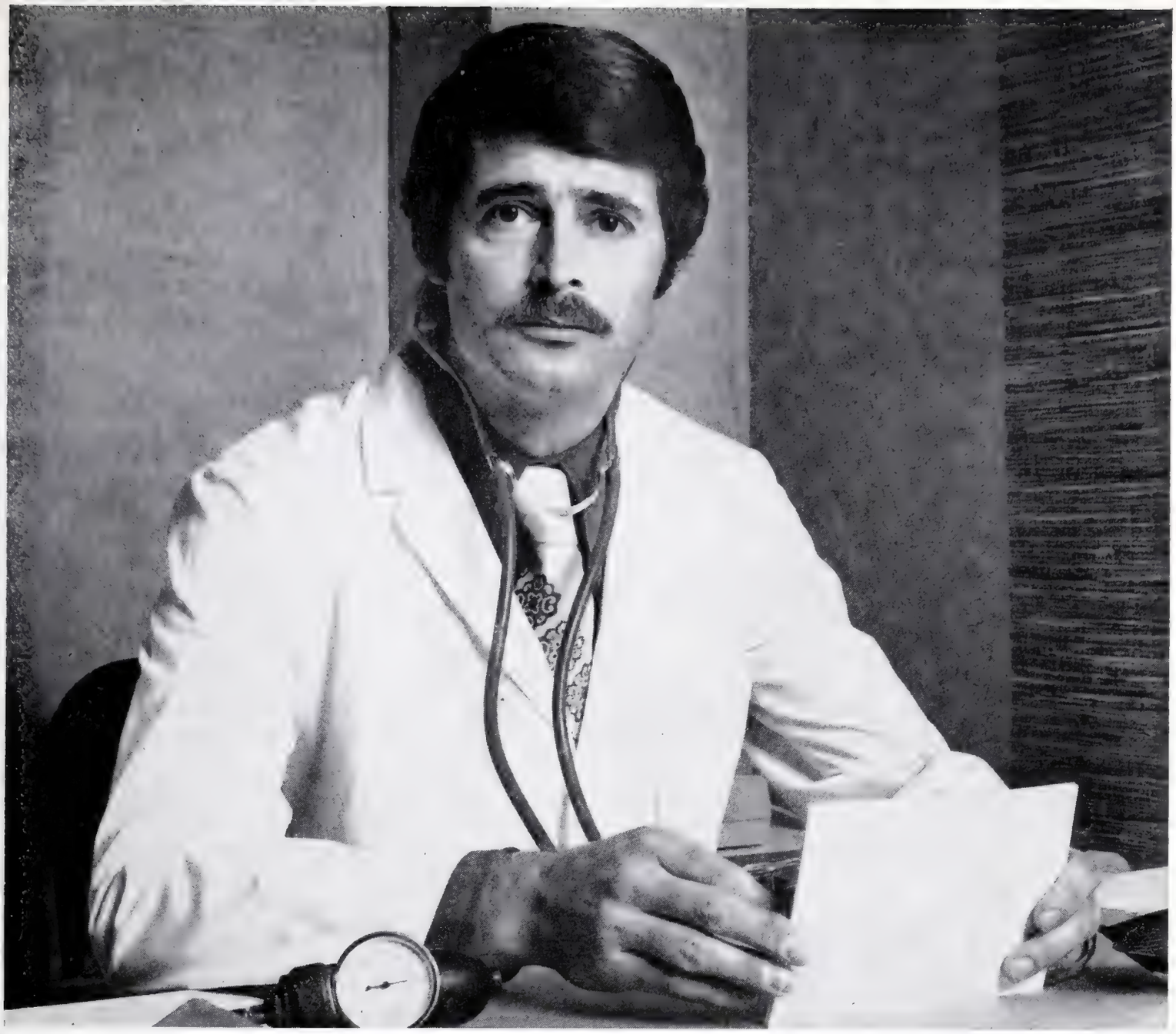
The response of the medical profession to these developments has, however, been conservative. Medicine, so long and so intensively concerned with the biochemical, physiological, and microbial causes of disease, may once again rediscover the patient and his environment. To be sure, one cannot gainsay the advances that viewpoint has made possible. Nevertheless, the key problem for medicine is not the disease, but the patient who is inexorably bound to a complex, ever-changing environment which, no matter how much we try to reduce and simplify, cannot, in the last analysis, be thus realistically conceived.[51]

Acknowledgements

The difficulties of historical research were considerably simplified by Ms Pauline Duffield, former head librarian, Texas Medical Association; and Ms Dorothy T. Hanks, reference librarian, National Library of Medicine. Mr Malcolm Rigby and Mr John J. Smiles, National Oceanic and Atmospheric Administration, provided me with the picture of Cline (Fig 1). Dr Helmut Lansberg, University of Maryland, who had known I. M. Cline as a friend and colleague, reviewed an early draft of the manuscript.

A reference list will be provided on request to Texas Medicine, 1801 North Lamar Blvd, Austin, TX 78701.

Dr. Sargent, Professor of Human Ecology, University of Texas at Houston, School of Public Health, PO Box 20186, Houston, Texas 77025.



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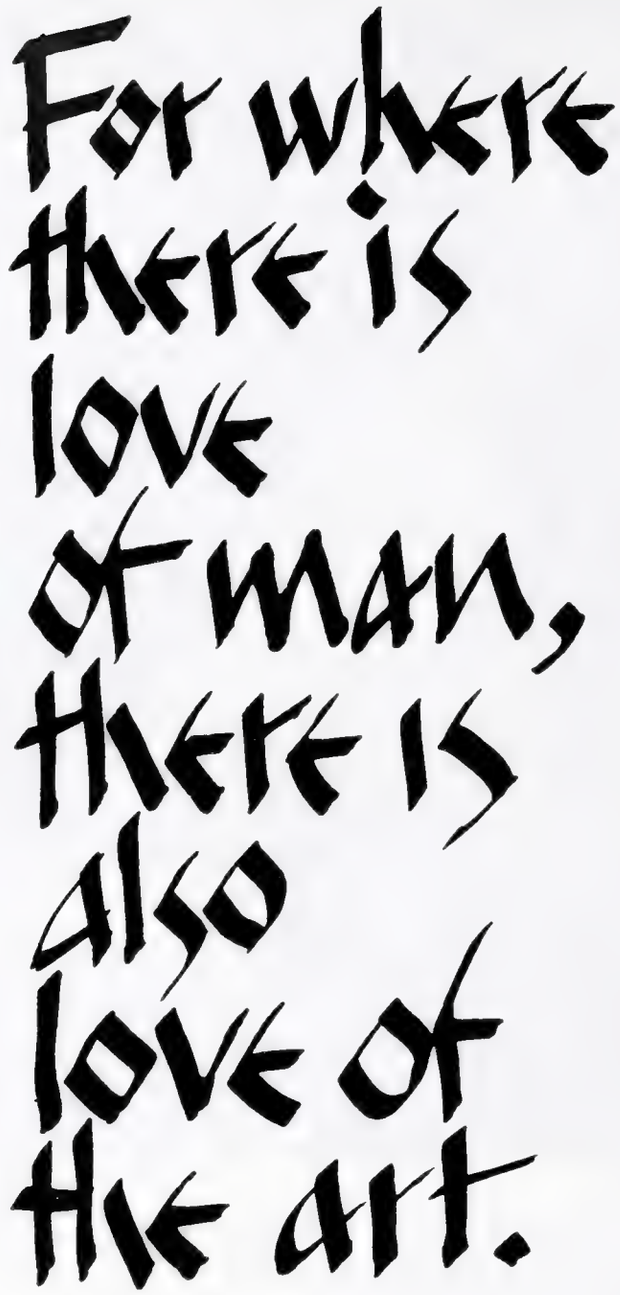

Texas physicians and their spouses are finding time to enrich their communities and their profession. Through contributions to scholarship funds, the TMA Physicians Benevolent Fund, public health education and numerous other projects, they donate services, dollars, and inspiration.

Tarrant County Medical Society, its woman's auxiliary, and the Fort Worth Academy of Medicine have initiated Tel-Med in the Fort Worth area. Tel-Med, a free telephone health information service, offers information in both Spanish and English. Callers may select one of the 200 three-to-five minute messages to be played by the switchboard operator, who is a member of the Woman's Auxiliary to the Tarrant County Medical Society. Tapes cover a myriad of subjects, including cancer, heart disease, alcoholism, child-rearing, and little league elbow. The most frequently requested tapes concern birth control, venereal disease, and drug abuse.

Tel-Med's first year of operation is being financed by a $20,000 grant from the Sid Richardson Foundation to the Fort Worth Academy of Medicine. Tarrant County Woman's Auxiliary will help finance its operation in the future.

Mrs Paul W. Mathews, Jr, Tel-Med project director for the Woman's Auxiliary, said Tel-Med was developed by the San Bernardino County (California) Medical Society in 1972. "Tel-Med is now in operation in 70 cities in the United States," she said.

Sept 24, 1976, the first day of Tel-Med's operation, saw approximately 100 callers per hour. During the first 16 days of operation, Mrs Mathews said 10,777 tapes were played.

"The anonymity of the telephone allows people to seek out information on subjects they might be hesitant to discuss with their doctor because they're embarrassed or because they hate to take up his time," said James W. Short, MD, executive officer of the Tarrant County Medical Society.

Editor's note: Texas physicians and their spouses are continuing the same services to their colleagues and communities as Hippocrates expressed in his *Precepts, Chap. 1.*

W. V. Bradshaw, Jr, MD, president of the Tarrant County Medical Society and Director of the Fort Worth Health Department, hails the system as a valuable tool in the area of preventive medicine.

"The Tel-Med program offers a unique and valuable health educational opportunity for the citizens of this area," he said.

Among the most widely known auxiliary projects in Texas is "Shotzy's Kingdom," a puppet show developed by the Bexar County Auxiliary to educate children on the importance of immunizations. Shotzy premiered in 1972, when the play headlined the auxiliary's youth safety fair. The show won a community service award from a local newspaper, was cited for excellence by the Woman's Conference of the National Safety Council, and contributed to the auxiliary's winning the "Outstanding Organization of 1972" award from San Antonio's Council of Presidents.

Among the stage hands involved in the production of Shotzy were Everett P. Bratcher, MD, who donated time and talent to build a two-level, seven-foot portable theatre for the production. The eleven life-like puppets were skillfully designed and made by auxiliary members. Auxiliary members, as well as physicians and their children, portray various characters in the play, including Shotzy, a dragon who thinks he's a dog, and his master, the Prince. Other characters are the Dark Monster of the Forest; Mary, Mary Quite Contrary; Jack Horner; Humpty Dumpty and Old King Cole.

The play was taped for television showing and used extensively in the San Antonio Area during Immunization Action Month. Shotzy's fame and benefit spread even further when the Honolulu auxiliary studied the show, in hopes of using him as a model for a similar project in Hawaii.

The Bexar County Medical Society, San Antonio, Bexar County and the San Antonio Fire Department joined forces in early 1972 to develop Emergency Medical Services (EMS) system in San Antonio.

EMS is not limited to ambulance service. It also includes education in cardio-pulmonary resuscitation, the Heimlick maneuver, and other life support techniques.

San Antonio's EMS recently was presented with a citation from the City of San Antonio for its "superb record and performance in the line of duty." Additionally, the American Legion has honored five individual EMS technicians, who are members of the Fire Department, for their performances in life saving situations. Also among their awards are more than 300 letters from grateful citizens.

Still another tribute to San Antonio's EMS system is the fact that after touring the United States, representatives from the Iranian government chose the San Antonio system as a model for their pilot program.

San Antonio physicians also participate in a local radio program, "Morning Magazine." Since August, doctors have been regular guests on a special segment of the program called "Good Morning, Doctor," which is broadcast by station WOAI.

Physicians in Smith County compile and distribute a health services directory to new residents of Tyler. According to the executive secretary to the County Medical Society, "Several groups have commended these, but the Chamber of Commerce has especially found it useful."

The booklet, originally printed in 1974 and revised this year, directs newcomers to information on planned parenthood, Alcoholics Anonymous, ambulance service, convalescent homes, hospitals, emergency room care, pharmacies, runaway hot lines and several voluntary health organizations. The directory also offers advice on how to select a doctor for your family, as well as a summary of the function and role of the county medical society.

The members of the Tom Green Eight County Medical Society have supported a science fair at Angelo State University for more than five years. This year physicians made donations which enabled two representatives to attend the 27th International Science and Engineering Fair in Denver. One of the representatives wrote the Society, "Within our school the interest in scientific research has greatly expanded . . . A science fair is an excellent eaching tool, and learning experience for students."

"The principal objective of the medical profession is to render service to humanity with full respect to the dignity of man."

In keeping with the spirit of this excerpt from the Principle of Medical Ethics of the American Medical Association, the members of the Texas Medical Association created the Physicians Benevolent Fund. For the physician who is unable to work, or for a physician's widow who is without adequate means of support, the answer may be the Physicians Benevolent Fund. As of November, 1976, assistance payments were being made to 20 individuals in an amount of more than $5,000 per month. The fund includes profits of many county auxiliary fund raising efforts.

As TMA members consider the future, scholarship funds and health career clubs are a major part of community activities. The TMA Auxiliary Committee on Health Careers has provided $24,873 for scholarships and $1,788 for loans, as well as more than 80 health career clubs and future nurses clubs.

The TMA Board of Trustees oversees several scholarships including the Dr S. E. Thompson Fund for students at medical schools of the University of Texas System, and the Valley Family Physicians Loan Fund for Rio Grande Valley students interested in returning to the Valley to practice medicine.

A TMA physician is not only doctor. He's also a speaker, a program organizer, a fund raiser, a volunteer in a public health program, and much more.

Medical Newsmakers

BRASWELL LOCKER, MD, of Brownwood, has been honored as a "Distinguished Alumnus" of Daniel Baker College in Brownwood. Daniel Baker College was incorporated into Howard Payne University in 1953. Dr Locker is a past president of TMA. He is also a past chairman of TMA's Board of Councilors and a member of the Texas Ophthalmological Association.

DOYLE ROGERS, MD, JD, has been honored as a "Distinguished Alumnus" of Howard Payne University in Brownwood. Dr Rogers, a pathologist and attorney, lives in Houston.

KERN WILDENTHAL, MD, of Dallas, a heart research scientist, has been appointed acting dean of the Graduate School of Biomedical Sciences at The University of Texas Health Science Center at Dallas. A search committee is at work to make recommendations for a permanent chairman for the graduate school. Dr Wildenthal recently returned from a year as Guggenheim Fellow and Visiting Scientist at the University of Cambridge, England. He has developed new methods of heart culture and preservation. An associate director of the Weinberger Laboratory for Cardiopulmonary Research at Southwestern Medical School, he was part of a team which successfully used the little known "diving reflex" to aid in control of a runaway heart condition known as paroxysmal atrial tachycardia.

JAMES C. GUCKIAN, MD, of Galveston, associate professor of internal medicine and microbiology at The University of Texas Medical Branch in Galveston, has been named recipient of the first annual Dean of Medicine's Teacher of the Year Award. The award is made in recognition of "meritorious achievement in the field of medical education," at the Medical Branch. Dr Guckian, a graduate of UTMB, also received his postgraduate training at Galveston, serving as a research associate, intern, and resident in internal medicine, and a fellow in internal medicine in infectious diseases. He is currently consultant to the U.S. Public Health Service Hospital in Galveston and Associate Editor of Continuing Education for the *Family Physician*.

G. VALTER BRINDLEY, JR., MD, thoracic surgeon at the Scott and White Clinic in Temple, former TMA president, and a consultant on TMA's Council on Medical Education and Hospitals, has been elected as a regional delegate to the American Hospital Association. He has been elected to a three-year term.

JOSEPH T. PAINTER, MD, of Houston, has been named Vice President for Administration at The University of Texas M.D. Anderson Hospital and Tumor Institute. Prior to being appointed vice president, Dr Painter served as associate director of M.D. Anderson in charge of outreach programs. He serves as chairman of the Texas Institute for Medical Assessment and as a delegate to the American Medical Association.

Braswell Locker, MD

James C. Guckian, MD

G. Valter Brindley, Jr, MD

Joseph T. Painter, MD

Charles M. Gaitz, MD

CHARLES M. GAITZ, MD, psychiatrist and chief of gerontology research of the Texas Research Institute of Mental Sciences in Houston, assumed the presidency of the Gerontological Society at its annual meeting in New York in October. Dr Gaitz, 54, is a specialist in geriatric psychiatry who has been one of the country's chief proponents of better health care for elderly people. His research supports the idea that growth and development continue throughout life, and that old age is a stage, not a disease. The geriatric service he established at the Texas Research Institute of Mental Sciences four years ago renders social, medical and psychiatric services to the aged. Dr Gaitz is a Fellow of the American College of Psychiatrists, clinical professor of psychiatry at Baylor College of Medicine, and chief of psychiatry at St. Anthony Center.

The Texas Chapter of the American Academy of Pediatrics has been named recipient of the Wyeth Outstanding Chapter Awards for 1976. The Texas group, winner of the award for large chapters, was cited for "developing well identified goals illustrating growth and development of the chapter." The chapter has worked to identify communities with unmet child health needs, and will help plan services for these groups through participation in state agencies and governing bodies. Texas pediatricians are continuing the Expanded Child Health Care Project in Eagle Pass, Tex. The project, originally launched with federal funds, is now supported by local and state revenue. It serves 5,000 needy children annually. Texas chapter chairman is WILLIAM CONKLING, MD, of Navasota.

A Houston eye physician won the first place award in the ophthalmology film program at the annual meeting of the American Academy of Ophthalmology and Otolaryngology. LOUIS J. GIRARD, MD, who produced three medical films shown at the meeting, won the top award for his film, "The Anterior Adnexa," which depicts the front of the eye and related structures.

JERRY MARCONTELL, MD, of Houston has been invited to serve on the new AMA Ad Hoc Committee on Services to Young Physicians. The 15-member committee will ascertain the needs of young, practicing physicians and make recommendations for the modification of existing AMA activities and the creation of new services.

MEDICINE AND THE LAW

PHYSICIAN'S CIVIL RIGHTS NOT VIOLATED WHEN DENIED COUNSEL DURING A FEES INVESTIGATION BY THE COUNTY MEDICAL SOCIETY

In the following case[1] a physician claimed his civil rights were violated because he was not allowed the right of counsel or cross-examination during an investigation by the county medical society's Adjudication and Medical Testimony Committee.

Facts

The county medical society committee was investigating a fee charge complaint against a physician. The society's bylaws included no right to counsel or cross-examination in a fee charge complaint proceeding. The physician contended this denied him rights guaranteed by the Fifth, Sixth, and Fourteenth Amendments of the U.S. Constitution and by virtue of Title 42 U.S.C.A. 1983, which states, "Every person who, under color of any statute, ordinance, regulation, custom, or usage, of any state or territory, subjects or causes to be subjected, any citizen of the United States or other person within the jurisdiction thereof, to the deprivation of any rights, privileges, or immunities secured by the constitution and laws, shall be liable to the party injured in action at law, suit in equity, or other proper proceeding for redress."

Ruling

The District Court granted a motion to dismiss the suit for lack of subject matter jurisdiction.

The Appelate Court found the county medical society to be a private, voluntary organization, and an affiliate of the Texas and American Medical Associations. The society obtained its revenues from membership dues and publication of the society's bulletin.

It received no funds from the state of Texas or any governmental agency. The society had no power to issue, suspend, revoke, or otherwise affect the licensing of doctors practicing in Texas. That authority, according to the court, rested with the Texas State Board of Medical Examiners.

The court further found that a physician does not have to belong to the society in order to practice medicine, and the society had no power or authority to enforce an order from the State Board of Medical Examiners in a disciplinary proceeding, nor in any other proceeding. There was no evidence in this case of dissemination of information regarding the professional conduct of the physicians between the society and the State Board.

Discussion

The thrust of the physician's argument was that the society operated as an arm of the Texas State Board of Medical Examiners in policing the ethics of the profession. The district court found no such evidence to support this contention. The doctor pointed out a specific occasion when the State Board had found him guilty of "unprofessional conduct likely to defraud the public."

Although the society did recommend a course of action to be followed in complying with the State Board's finding, this was done at the request of the physician.

The court found that whatever the ultimate sanction imposed by the society arising from the instant complaint, it would not affect the doctor's license to practice medicine.

The court said that Section 1983 of 42 U.S.C.A. requires that there be state involvement before a cause of action can be asserted. The Appellate Court found that the facts proven in the District Court clearly indicated a lack of state involvement sufficient for Section 1983 purposes.

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[1] *Ford vs Harris County Medical Society, et al,* No. 76-1113, United States Court of Appeals, Fifth Circuit, July 19, 1976.

The court cited as authority a Louisiana case where a dentist was denied membership for failure to receive the affirmative vote of a majority of the members. There was no issue of race discrimination in that case and the District Court there also held that there was no Section 1983 cause of action.

Conclusion

Activities of a county medical society should be conducted in conformity with the bylaws and constitution of the society. Contemporary due process requirements necessitate that a member cannot be disciplined without first receiving notice of intention to proceed against the member, a recital of the charges or accusation, and a fair and impartial hearing where he or she may respond to the charges.

Once these due process requirements have been satisfied, courts have traditionally avoided interjecting the judicial processes into decisions of an association unless there are discrimination deficiencies (sometimes called civil rights issues). Hence, the court wisely found that adherence to the bylaws of the society was expressly not grounds for a cause of action involving procedural matters relating to the society's bylaws.

This case affords additional authority for a county medical society after procedural due process to proceed with professional disciplinary matters without the interference of the courts in the internal matters of the society.

Jack Maroney, Ace Pickens
Brown, Maroney, Rose, Baker & Barber
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Precautions: Do periodic serum electrolyte determinations (particularly important in patients vomiting excessively or receiving parenteral fluids). Periodic BUN and serum creatinine determinations should be made, especially in the elderly, diabetics, or those with suspected or confirmed renal insufficiency. Watch for signs of impending coma in severe liver disease. If spironolactone is used concomitantly, determine serum K^+ frequently; both can cause K^+ retention and elevated serum K^+. Two deaths have been reported with such concomitant therapy (in one, recommended dosage was exceeded, in the other serum electrolytes were not properly monitored). Observe regularly for possible blood dyscrasias, liver damage, other idiosyncratic reactions. Blood dyscrasias have been reported in patients receiving Dyrenium® (triamterene, SK&F Co.), and leukopenia, thrombocytopenia, agranulocytosis, and aplastic anemia have been reported with thiazides. Do periodic blood studies in cirrhotics to check for nondrug-related variations in blood pictures, and in patients with folic acid depletion, since 'Dyrenium' may contribute to appearance of megaloblastosis. Antihypertensive effect may be enhanced in post-sympathectomy patients. Use cautiously in surgical patients. The following may occur: transient elevated BUN or creatinine or both, hyperglycemia and glycosuria (diabetic insulin requirements may be altered), hyperuricemia and gout, digitalis intoxication (in hypokalemia), decreasing alkali reserve with possible metabolic acidosis. 'Dyazide' interferes with fluorescent measurement of quinidine.

Adverse Reactions: Muscle cramps, weakness, dizziness, headache, dry mouth; anaphylaxis, rash, urticaria, photosensitivity, purpura, other dermatological conditions; nausea and vomiting, diarrhea, constipation, other gastrointestinal disturbances. Necrotizing vasculitis, paresthesias, icterus, pancreatitis, xanthopsia and, rarely, allergic pneumonitis have occurred with thiazides alone.

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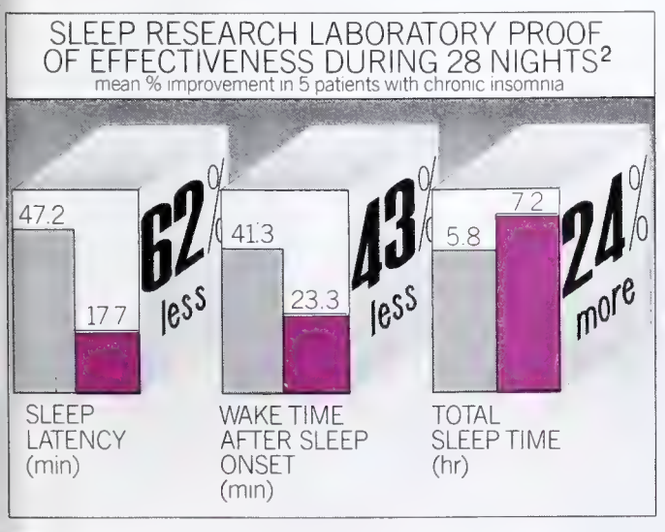

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Indications: Effective in all types of insomnia characterized by difficulty in falling asleep, frequent nocturnal awakenings and/or early morning awakening; in patients with recurring insomnia or poor sleeping habits; in acute or chronic medical situations requiring restful sleep. Since insomnia is often transient and intermittent, prolonged administration is generally not necessary or recommended.

Contraindications: Known hypersensitivity to flurazepam HCl.

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Not recommended for use in persons under 15 years of age. Though physical and psychological dependence have not been reported on recommended doses, use caution in administering to addiction-prone individuals or those who might increase dosage.

Precautions: In elderly and debilitated, limit initial dosage to 15 mg to preclude oversedation, dizziness and/or ataxia. Consider potential additive effects with other hypnotics or CNS depressants. Employ usual precautions in patients who are severely depressed, or with latent depression or suicidal tendencies. Periodic blood counts and liver and kidney function tests are advised during repeated therapy. Observe usual precautions in presence of impaired renal or hepatic function.

Adverse Reactions: Dizziness, drowsiness, lightheadedness, staggering, ataxia and falling have occurred, particularly in elderly or debilitated patients. Severe sedation, lethargy, disorientation and coma, probably indicative of drug intolerance or overdosage, have been reported. Also reported: headache, heartburn, upset stomach, nausea, vomiting, diarrhea, constipation, GI pain, nervousness, talkativeness, apprehension, irritability, weakness, palpitations, chest pains, body and joint pains and GU complaints. There have also been rare occurrences of leukopenia, granulocytopenia, sweating, flushes, difficulty in focusing, blurred vision, burning eyes, faintness, hypotension, shortness of breath, pruritus, skin rash, dry mouth, bitter taste, excessive salivation, anorexia, euphoria, depression, slurred speech, confusion, restlessness, hallucinations, paradoxical reactions, *e.g.*, excitement, stimulation and hyperactivity, and elevated SGOT, SGPT, total and direct bilirubins and alkaline phosphatase.

Dosage: Individualize for maximum beneficial effect. *Adults:* 30 mg usual dosage; 15 mg may suffice in some patients. *Elderly or debilitated patients:* 15 mg initially until response is determined.

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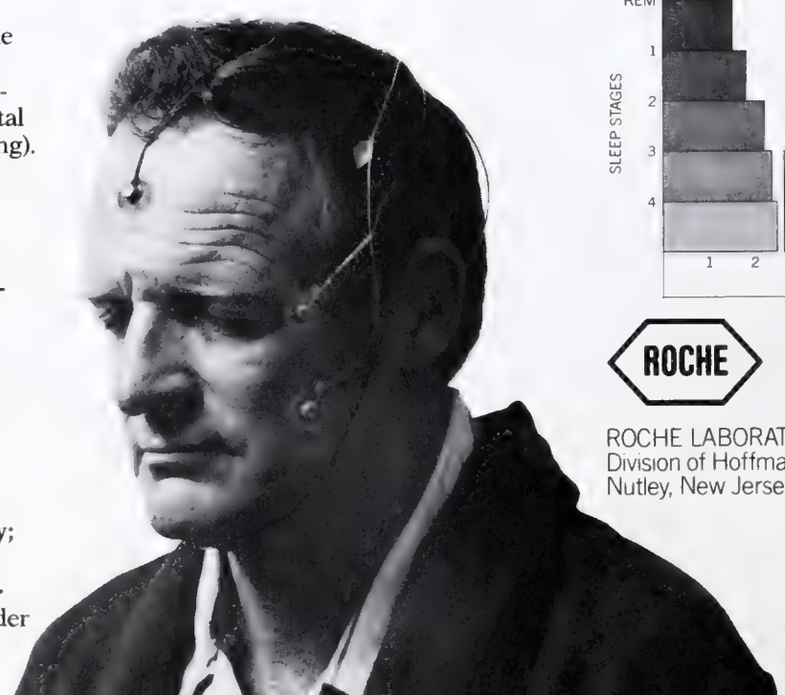

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4. Data on file, Medical Department, Hoffmann-La Roche Inc., Nutley NJ

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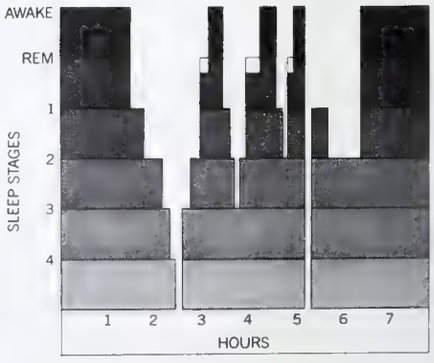

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RECENTLY DECEASED MEMBERS OF THE TEXAS MEDICAL ASSOCIATION

E.W. BREIHAN
Dallas, 1883-1976

B.R. BUFORD
Dallas, 1895-1976

J.F. COLLINS, Jr
Denton, 1931-1976

W.J. FISHER
Wichita Falls, 1932-1976

A.I. GOLDBERG
Fort Worth, 1900-1976

J.E. PREWETT
Austin, 1917-1976

N.G. RAY
Dallas, 1930-1976

N.L. SCHILLER
Austin, 1909-1976

C.F. SHERMAN
Temple, 1904-1976

G.H. SMITH, Jr
Temple, 1937-1976

V.L. TUCK
Sherman, 1905-1976

G.K. WALLACE
Dallas, 1913-1976

IN MEMORIAM

The Memorial Library of the Texas Medical Association stands as a permanent memorial to physicians who have served their patients, their profession and the people of Texas so faithfully over the years.

The Library ranks as one of the finest in the nation. It is providing more than 10,000 reference requests, 3,500 tapes and cassettes, and 2,500 films each year to physicians, students, and to those seeking information related to medicine and health care. The resources of the Library include 60,000 volumes, 400 tapes, and 300 scientific and lay films; more than 1,300 professional journals are received monthly. Services are provided without charge.

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Medicine in literature

EDITOR'S NOTE: This month's bibliography, prepared by the staff of TMA's Memorial Library, lists articles related to skiing injuries. Copies of these and other articles pertaining to skiing injuries are available from the Memorial Library.

SKIING INJURIES

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Recent deaths

Dr Breihan

Dr Buford

Dr Collins

E. W. Breihan, MD

Dr Ernest Winfred Breihan, an honorary member of Texas Medical Association since 1966, died May 7, 1976.
Dr Breihan, 93, retired from practice in 1966. He was a 55-year resident of Dallas.
The family physician was born in Industry, Tex, in 1883. He received his bachelor's and master's degrees from The University of Texas, Austin. After teaching science for three years in Austin, he moved to Galveston to attend The University of Texas Medical Branch, graduating in 1914. He interned at St Mary's Infirmary, Galveston, and was a resident at Philadelphia General Hospital from 1914 to 1916.
During World War I, Dr Breihan served as a captain in the US Army Medical Corps in France. He was awarded two gold war service chevrons.
In 1919, he began a family practice in Denton. He moved to Dallas in 1922. In 1937, Dr Breihan became medical director of Guardian International Life Insurance Company. He continued in this position until his retirement.
Dr Breihan was a member of the Dallas County Medical Society for 54 years. He also was a member of the American Medical Association and a past president of the Society of Life Insurance Medical Directors of Texas. He had been a staff physician at St Paul Hospital and Methodist Hospital of Dallas, and received the St Paul Award of Honor for dedicated service.
Dr Breihan also was a member of the American Legion and White Rock Methodist Church. He had been the chairman of the Board of Trustees of Trinity United Methodist Church for 20 years.
Surviving are his sisters, Laura and Olga Breihan of Dallas and Mrs Lewis Behrens of Copperas Cove, Tex; and ten nieces and nephews.

B.R. Buford, MD

Dr Ben Ragsdale Buford, an honorary member of Texas Medical Association, died April 7, 1976, in Dallas.
Dr Buford, 80, had practiced in Dallas more than 50 years.
The native of Sulphur Springs was a graduate of Southwestern University, Georgetown, Tex. He moved to Dallas in 1917, and received his MD from Baylor College of Medicine in 1921. Following graduation from medical school, Dr Buford served his internship and residency at Parkland Memorial Hospital, also in Dallas.
In 1923, the physician began his general practice. Later, he limited his practice to internal medicine and rheumatology. From 1943 to 1953, Dr Buford was a clinical assistant professor of internal medicine at The University of Texas Southwestern Medical School.
Dr Buford was a fellow and founding member of the Dallas Southern Clinical Society, as well as a past president of the organization. He also was a member of the American Rheumatism Association, Texas Rheumatism Association, Southern Medical Association, Dallas Internists Club, Dallas County Medical Society (honorary member) and American Medical Association.
He was a past president of the Baylor Medical College Alumni and a member of the Dallas Hunting and Fishing Club.
Dr Buford is survived by his wife, Verna Sklibos Buford, Dallas; daughters, Jane B. Henkel, Northbrook, Ill, and Julie Buford, Dallas; sisters, Rose Buford Driver, Dallas, and Mrs William Z. Tramel, Sulphur Springs; two grandchildren and one great-grandchild.

J. F. Collins, Jr, MD

Denton urologist Dr John Frank Collins, Jr, died May 24, 1976, at the age of 44.

Dr Collins was a native of McKinney, Tex, and had practiced in Denton since 1968. He attended The University of Texas in Austin three years before entering UT Medical Branch at Galveston.

Following graduation from medical school in 1956, Dr Collins became an intern at Akron (Ohio) City Hospital. His residency was at UT Medical Branch.

Dr Collins was a lieutenant in the US Naval Reserve. His professional memberships included the American Medical Association; South Central Section, American Urological Association; the Texas Urological Association and the Denton County Medical Society. He also was a member of the Alpha Kappa Kappa medical fraternity and the Rotary Club.

Survivors include his wife, Margaret Kraus Collins; sons, John Joseph Collins and Charles Kraus Collins; daughter, Catherine Ann Collins; parents, Mr and Mrs John F. Collins, all of Denton; and a brother, Charles M. Collins, MD, of Lake Jackson.

W.J. Fisher, MD

Dr William Joel Fisher, 43, died March 24, 1976, in Wichita Falls.

Dr Fisher had been a member of the US Air Force more than 18 years. He had served as chairman of a Task Force on Drug Abuse and as a senior consultant in psychiatry to the US Air Force Surgeon General. He formerly was a clinical instructor in psychiatry at the University of Texas at San Antonio. At the time of his death, he was stationed at Sheppard Air Force Base, in Wichita Falls, where he was chief of psychiatry and an instructor. He previously had been stationed at Wright-Patterson Medical Center, Dayton, Ohio, as an intern; Wilford Hall USAF Medical Center, San Antonio, as a resident; and in Vietnam.

During his military career, Dr Fisher received the Air Medal, the Bronze Star and the Legion of Merit. He also received a commendation medal for his part in setting up a drug treatment center at Lackland Air Force Base.

A native of Louisville, Ohio, Dr Fisher was graduated from Hiram College, Hiram, Ohio, in 1960. He received his medical degree from Western Reserve University Medical School, Cleveland, in 1963.

Dr Fisher was a former chairman of the Board of Education for the Mount Olive Lutheran Parochial School, San Antonio. His professional memberships included the Wichita-Young-Archer-Jack County Medical Society, American Medical Association and American Psychiatric Association.

Surviving Dr Fisher are his wife, Beckie Jones Fisher, and infant daughter, Jennifer Joell Fisher, Memphis; daughters, Deborah Ann, Pamela Louise and Cynthia Lea Fisher, all of San Antonio; his mother, Mrs Pete Vucas, Louisville, Ohio; and sisters, Mrs Joe Leeson, North Canton, Ohio, and Mrs Martin Leftoff, Wilson, Kan; and brother, Jerry Fisher, Clovis, NM.

Dr Fisher

Dr Goldberg

A. I. Goldberg, MD

Dr Abraham Isaac Goldberg, 74, died May 7, 1976, in Fort Worth.

The gastroenterologist was a native of Baltimore. He was graduated from The University of Texas at Austin and UT Medical Branch, Galveston (1926). He served his internship and residency at St Joseph Hospital, Fort Worth, and began practicing in 1928.

Dr Goldberg completed extensive training in the use of hypnotic techniques, and was a member of the American Board of Medical Hypnosis and the International

Dr Prewett

Dr Ray

Society of Clinical and Experimental Hypnosis. He was a charter member and life fellow in the American Society of Clinical Hypnosis.

His other professional memberships included the World Medical Association; the American Geriatrics Society (fellow); the American Academy of Family Physicians (charter fellow); the American Physicians Fellowship, Inc, for the Israel Medical Association; the American Medical Association and the Tarrant County Medical Society. He also was a founder and member of the Fort Worth Academy of Medicine.

He was a Mason, a Shriner and honorary member of the Hella Shrine Temple. In 1975, the Scottish Rite Supreme Council honored Dr Goldberg with the Thirty-third degree, Inspector General Honorary. He also had been recognized for his medical contributions to the Masonic Home. During the past 20 years the doctor had served as the Home's physician and was head physician the last seven years.

In 1974, Dr Goldberg, a member of the Century Club of the Fort Worth YMCA, was awarded a plaque by the YMCA for his outstanding service to youth.

Dr Goldberg is survived by his wife, Florene Richardson Goldberg, Fort Worth; daughters, Gayle Stout and Margie Lott, Houston; six sisters, one brother and four grandchildren.

J. E. Prewett, MD

Dr John Edwards Prewett, health officer for the city of Rollingwood and a longtime Austin physician, died June 26, 1976.

Dr Prewett, 59, had been a family practitioner in Austin for more than 26 years. He was a native of Texarkana, Tex. In 1938 he received his BA degree from The University of Texas, Austin. He received his MD from The University of Texas Medical Branch, Galveston, in 1948. Following graduation from medical school, he became an intern at Wichita Falls (Tex) Clinic. He also took an obstetrics-gynecology residency at Brackenridge Hospital, Austin.

Prior to entering medical school, Dr Prewett had taught Spanish and athletics in Hebbronville and Manor, Tex. He had been a member of the National Guard and had served in the US Air Force during World War II. At the time of his death, Dr Prewett was a captain in the Air Force Reserve. He received a Distinguished Service Award for his service in the interest of disabled veterans.

His professional memberships included the Travis County Medical Society, Texas Academy of Family Physicians and American Academy of Family Physicians (charter fellow). Dr Prewett, who was fluent in Spanish and French, had attended professional seminars in Denmark, Spain and South America.

He also was a former member of the Optimists and Kiwanis Clubs. He was an active Mason, a member of Austin Lodge No 12, AF & AM, Scottish Rite bodies and Ben Hur Temple.

Surviving Dr Prewett are his wife, Gloria McRae Prewett; sons, Jon McRae Prewett and John Edwards Prewett, Jr; and daughter, Rebecca Jane Prewett, all of Austin; two other daughters, Mrs Quince A. Tiller of Manchaca, Tex, and Mrs Lloyd Watson of Virginia Beach, Va; brothers, Hartford H. Prewett of Houston, and Carroll L. Prewett of Waco; sister, Nancy Prewett Dudley of Austin; five granddaughters and eight nieces and nephews.

N. G. Ray, MD

Dr Norwin Gene Ray died in Dallas May 7, 1976 as a result of smoke inhalation when his house caught fire.

Dr Ray, 45, was a native of Dallas and had practiced there since 1962. He had been a clinical instructor in internal medicine at The University of Texas Health Science Center at Dallas since 1962.

Dr Ray was an honor graduate of Southern Methodist University, Dallas (1950). He attended graduate school at SMU and The University of Texas, Austin, before entering The University of Texas Medical

Branch, Galveston. After receiving an MD degree in 1958, Dr Ray interned at Michael Reese Hospital, Chicago, and was a resident in internal medicine at the Veterans Administration Hospital, Dallas.
The doctor's professional memberships included the Dallas Academy of Internal Medicine, Dallas Internists' Club, Dallas Diabetes Association, Dallas County Medical Society and American Medical Association. He also was a member of Tau Delta Phi social fraternity and Temple Emanu-El.
Surviving Dr Ray are an uncle, Henry Printz, and aunt, Bertha Zekman, both of Denver; and cousins, Mrs Thelma W. Swango, Norman Ray, Dr Maury Ray, Dr Thurman J. Ray and Sylvan E. Ray, all of Dallas.

N. L. Schiller, MD

Dr Nelson Lorenz Schiller, an Austin general practitioner for 34 years, died Aug 14, 1976. He was 67 years of age.
Dr Schiller was born in Buckholtz, Tex. He attended Wartburg College in Waverly, Iowa, and Texas Lutheran College in Seguin. In 1931 he completed his bachelor of arts degree at The University of Texas. In 1935 he was graduated from The University of Texas Medical Branch. Dr Schiller served his internship at the Tacoma General Hospital and Pierce County Hospital, both in Tacoma, Wash. Before moving to Austin in 1942, he practiced in Pflugerville and Brenham, Tex.
He was a member of the Travis County Medical Society, American Medical Association, American Academy of Family Physicians (charter fellow) and Texas Academy of Family Physicians. Dr Schiller served as a Texas Academy of Family Physicians state director and as a member of its committee on education.
The physician also was an active member of St Martin's Evangelical Lutheran Church, having served on the church council and numerous committees.
Surviving Dr Schiller are his wife, Eleonora Fuchs Schiller, Austin; son, Nelson Louis Schiller, also of Austin; daughter, Joyce E. Miller, Fairfax, Va; sister, Elvira Brehmer, Kerrville, and two grandchildren.

Dr Schiller

Dr Smith

C. F. Sherman, MD

Dr Cyril Fantus Sherman, a Temple radiologist, died April 18, 1976.
Dr Sherman, 72, had practiced in Madison, Wis, before moving to Temple in 1955.
A native of Hillsboro, Wis, Dr Sherman attended the University of Wisconsin in Madison from 1922 to 1924. He entered the University of Colorado Medical School in Denver in 1924, and received his MD in 1928. His internship was at St Mary's Hospital, Madison, Wis, during 1928-1929. During 1929-1931, he held a radiology residency at the University of Chicago Hospitals and Clinics. Dr Sherman also was involved in postgraduate studies in pathology at the Veterans Administration Hospital in Los Angeles in 1935 and 1936.
The physician's professional memberships included the Bell County Medical Society, American Medical Association and American College of Radiology. He also was a member of the Presbyterian church, was a Mason and a Shriner and was actively involved in his hobby as a ham radio operator.
Surviving Dr Sherman is his wife, Eylene Worden Sherman, Temple.

G. H. Smith, Jr, MD

Dr Garland Hansford Smith, Jr, 38, of Temple died at his home April 19, 1976. The cause of death was an accidental gunshot wound.
Dr Smith was chief of the section on nephrology at Scott and White Memorial Hospital. He had lived in Temple since 1969.
Dr Smith, a native of Uvalde, was graduated from The University of Texas, Austin, in 1959. He received his MD from The

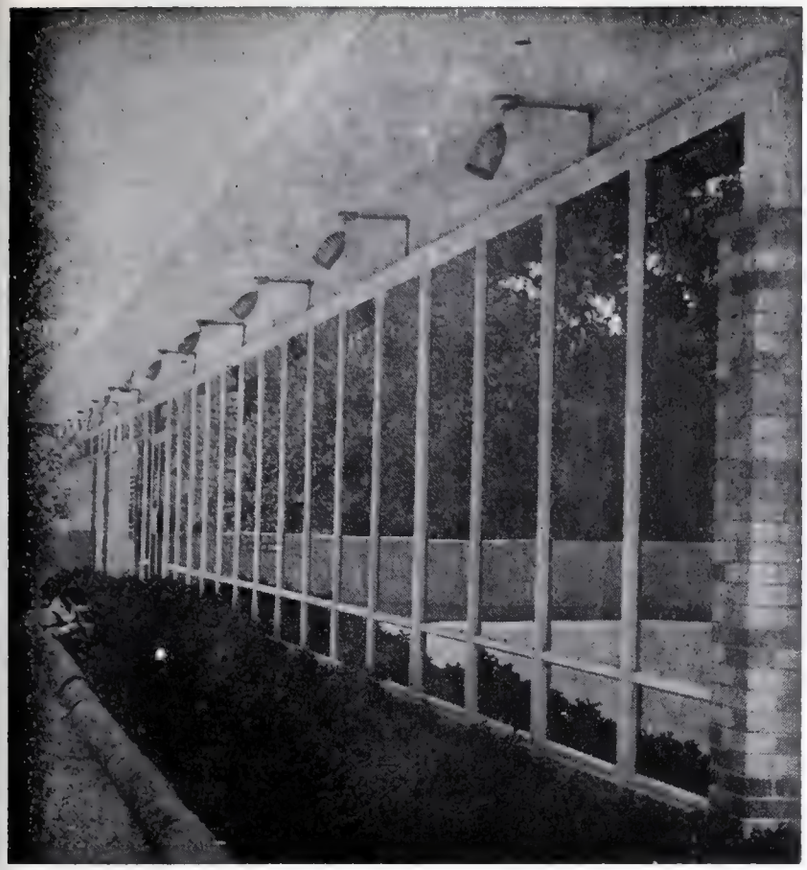
University of Texas Medical Branch, Galveston, in 1962. Following his graduation from medical school he was an intern and resident at John Sealy Hospital, also in Galveston.
Dr Smith was a member of the Alpha Omega Alpha honorary medical fraternity and the Sigma Chi medical fraternity. He also was a member of the Bell County Medical Society, American Medical Association and American Society of Nephrologists. He belonged to Christ Episcopal Church of Temple.
The physician had served as a captain in the Texas National Guard in San Antonio and in the US Army in California and Vietnam.
Survivors include his wife, Kay Cartwright Smith; daughter, Kelley Smith; sons, Kyle Smith, Douglas Smith, Charles Smith, Scott Smith and Slade Smith, all of Temple; and his parents, Laura Timberlake, Uvalde, and Garland H. Smith, Sr, San Antonio.

V. L. Tuck, MD

Dr Vernon Lee Tuck, 70, a former Sherman, Tex, mayor, died June 6, 1976 following an extended illness.
Dr Tuck was a native of Sherman and had practiced there 40 years. He attended Austin College in Sherman, and in 1928 he was graduated from Bucknell University in Lewisburg, Pa. He received his MD from The University of Texas Medical Branch in 1932. Dr Tuck's residency was at Philadelphia General Hospital.
In 1935 he opened his practice in Sherman and continued to practice there until his retirement in 1975.
Dr Tuck was a veteran of World War II and received a decoration for his service as a US Army medical officer for the troops at Omaha Beach during the Normandy invasion of Europe.
The physician was a former Grayson County health officer. He was a fellow of both the International College of Surgeons and the American College of Surgeons. He was a past president of the Grayson County Medical Society and of the staff of Wilson N. Jones Memorial Hospital, Sherman. He also was a member of the American Medical Association.
Surviving are Dr Tuck's wife, Grace Burney Tuck, Sherman; son, Lon B. Tuck, Washington, DC; sisters, Mrs Kenneth Foree, Jr, Dallas; Mrs Elizabeth Higginbotham, Sherman, and Mrs W. J. Smith, Pampa; and sister-in-law, Mrs H. G. Tuck of Sherman.

G. K. Wallace, MD

Dr Gordon Kenneth Wallace died June 22, 1976, in Dallas, at the age of 62.
Dr Wallace, a native of Dallas, was medical director of the Great American Life Insurance Company and was a member of the staff of the Medical Arts Hospital of Dallas.
The internist received his undergraduate education at North Texas Agricultural College in Arlington. In 1935, he received his MD degree from Baylor College of Medicine, Dallas, and completed an internship there in 1936. Following a surgical internship at Bellevue Hospital Center in New York City, he held a medical (chest) residency at the Nassau County Sanitarium, Farmingdale, New York.
Dr Wallace returned to Dallas in 1937 to begin his private practice.
The physician's professional memberships included the Dallas County Medical Society, American Medical Association, Southern Medical Association and Dallas Southern Clinical Society. He also was a member of the Dallas Country Club.
Surviving Dr Wallace are his wife, Anna Henderson Wallace, and daughter, Mrs Mouzon Bass, both of Dallas; and sons, Gordon Wallace of Dallas and William Wallace of San Francisco.



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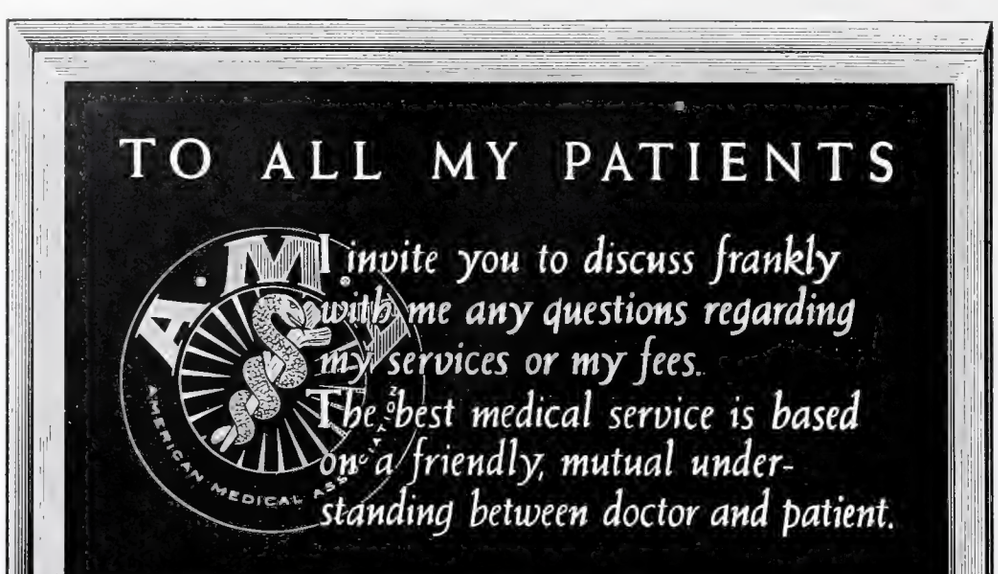

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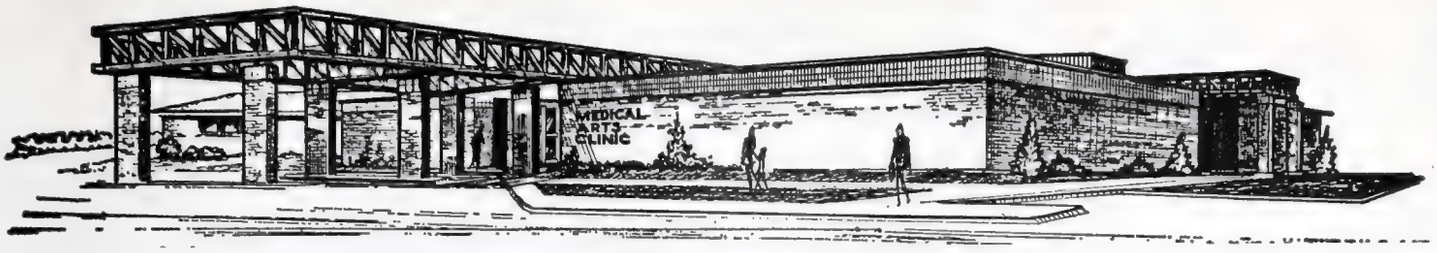

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WANTED ONE OR TWO BOARD ELIGIBLE FAMILY PRACTITIONERS to come into a growing multispecialty clinic. Many benefits that only a group practice can provide. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED BOARD ELIGIBLE OB-GYNECOLOGIST to join two others in the department with all new facilities in hospital and clinic. Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

LOCUM TENENS WANTED: Doctor interested in GP work with OB, to cover one doctor on weekly, monthly or any time of the year basis. Financial arrangement negotiable. Contact Chris S. Cruzcosa, M.D., 300 South 5th Street, Carrizo Springs, Texas 78834, 512-876-5236.

WANTED: ANESTHESIOLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: OPHTHALMOLOGIST TO JOIN growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

WANTED: INTERNIST, preferably with subspecialties in gastroenterology, pulmonary diseases, rheumatology or cardiology to join growing multispecialty clinic. Excellent facilities in new clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

PHYSICIANS AND PSYCHIATRISTS—general practice, pediatricians and psychiatrists for vacancies in state mental hospitals and state schools for mentally retarded. Salaries: $31,000 to $38,000 plus $1,000 for board certification plus up to $3,000 supplement in certain areas; usual State benefits. Liability protection provided under Texas law. Texas license or reciprocity required. Contact the Personnel Specialist, Texas Department of MHMR, P.O. Box 12668, Capitol Station, Austin, Texas 78711. 512-454-3761. An equal opportunity, affirmative action employer.

NEAR GULF COAST: Several specialties including family practice. Two accredited district hospitals, 1968 additions. Excellent potential to double present staff of 20. Offices available. Great rural place to raise family. Water recreation, hunting. 75 miles west of Houston. Steve Walters, Administrator, Box 910, Bay City, Texas 77414, 713-245-6383.

PSYCHIATRIST, board certified or eligible needed for modern forensic psychiatry program. Texas license required. Salary $34,000+. Immediate openings. Call or write: Robert B. Sheldon, M.D., Superintendent, Rusk State Hospital, P. O. Box 318, Rusk, Texas 75785; 214-683-5481.

WANTED: PEDIATRICIAN to join growing multispecialty clinic with excellent facilities. New Clinic building adjacent to new hospital. Many benefits that only a group practice can provide. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

GENERAL INTERNIST WANTED: Board certified or eligible to join expanding successful group. Busy hospital and office practice. Houston environs. Excellent salary and fringe benefits. Contact Doctors Clinic, 1501 Broadway, Galveston, Texas; attention Robert Walsh, Administrator.

GENERAL PRACTITIONER to join two GPs in Central Texas town between San Antonio and Houston on Interstate 10, 80 miles from Austin. Modern three man clinic; adjacent to 36 bed hospital, recently remodeled. Salary $40-48,000 per year. Partnership available after trial period. Contact Willis G. Youens, Jr., M.D., 105 N. Grohmann, Weimar, Texas 78962; 713-725-8545.

GENERAL PRACTITIONER—FAMILY PRACTICE: Clinic, including lab and x-ray. Join internist and general practitioner in busy practice. Salary and benefits negotiable with subsequent partnership offered. Contact Ribelles Clinic Associates, 9801 Katy Freeway, Houston, Texas 77024. 713-461-0072.

EMERGENCY DEPARTMENT GROUP, HOUSTON AREA, EXPANDING—choice of salary or fee-for-service with guarantee—malpractice paid—Call 713-861-7942 or write Greater Houston Emergency Physicians Association, 625 West 19th, Houston, Texas 77008.

FAMILY PRACTICE OR OPHTHALMOLOGIST. Attractive office in ideal location with excellent public exposure on corner with easy access. 1370 square feet at 30c per square foot per month in an underserved middleclass area of Irving. Formerly occupied by internist. Contact Litt Perry, DDS, 209 South O'Conner, Irving, Texas 75060; 214-259-4580.

WANTED: GP OR FP. Potentially, lucrative practice, suburban area of about 20,000. Willing to negotiate. Paul A. Grandy, M.D., North Lamar Medical Clinic, 10805 North Lamar Blvd., Austin, Texas 78753; 512-837-2640.

PSYCHIATRIST BOARD CERTIFIED OR ELIGIBLE. $36,000 to $40,000. Texas license required. Building a better and more dynamic program in State Hospital. Ideal family living town of 30,000, good schools, recreation, mild weather. Maurice A. Watts, M.D., Clinical Director, Big Spring State Hospital, Box 231, Big Spring, Texas, 79720; 915-267-8216.

PUBLIC HEALTH PHYSICIAN with Austin-Travis County Health Department in Austin, Texas. Clinical experience required. Public health background preferable but not required. Starting pay approximately $30,000, plus fringe benefits. Regular hours, 40 hours per week. Must have valid license to practice medicine in State of Texas. Contact Dr. Meisenbach, Austin-Travis County Health Department, 1313 Sabine, Austin, Texas 78701; telephone 512-474-6581.

SAN JACINTO METHODIST HOSPITAL, BAYTOWN, TEXAS. Anesthesiologist, solo or group practice. Home of Exxon, U.S. Steel; major expansions underway. High income. Bay area near Houston. Outstanding schools, colleges. Contact Administrator, 1101 Decker Drive, Baytown, Texas 77520; 713-422-3405.

PSYCHIATRIC RESIDENCY in approved three-year program. Effective connections with universities, medical schools, private clinics and community centers. Outstanding faculty and programs. Stipends with Texas license are $15,000, $16,000 and $17,000 per year. In addition, now offering residency in child psychiatry. For full information, write to Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe Street, Austin, Texas 78751.

CHILD PSYCHIATRY RESIDENCY may be taken before or after adult psychiatry training. Academic program in child development, family therapy, genetic and metabolic disorders, behavior therapy, group therapy, psychopharmacology and ethology. Basic clinical orientation in child development with intensive individual supervision in psychoanalytic and eclectic modalities and pediatric neurology. Research opportunities in genetic and metabolic disorders, child development, linguistic anthropology, community services and other fields. Excellent opportunities in teaching, administration, inpatient and outpatient clinical programs. New 60-bed in-patient unit for children. Liaison with graduate schools, medical school and community programs. Stipends: First year, $15,000; second year, $16,000; third year, $17,000; fourth year, $18,000. Contact Anthony P. Rousos, M.D., Director of Residency Training, Austin State Hospital, 4110 Guadalupe, Austin, Texas 78751.

WANTED: BOARD CERTIFIED OR ELIGIBLE OBSTETRICIAN-GYNECOLOGIST to join multispecialty clinic in Houston. Starting salary competitive, early partnership available. Contact Business Manager, Glen Valley Clinic, 7640 Bellfort, Houston, Texas 77061; 644-3344.

INTERNIST—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

PEDIATRICS—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas. 512-672-2811.

FAMILY PRACTICE—In small city South Central Texas; San Antonio, Austin area. Drawing area 22,000. 50-bed new hospital under construction. Financial assistance available. William B. Watts, Administrator, Gonzales County Hospital District, Gonzales, Texas 512-672-2811.

FAMILY PRACTITIONER WANTED to join two established family practitioners in Trinity, Texas. Former partner is leaving November 1976 for residency. A large ready made practice is available now. You are invited to investigate clinic and hospital facility, compatibility, economic and environment of rural practice in an outstanding recreational area that includes 2,000,000 acres of East Texas forest, 90,000 acre Lake Livingston, various golf courses, marinas, and country club developments. All guarantees, etc. are negotiable. Bring your wife. Sam R. Barnes, M.D. and J. Richard Cook, M.D., P.O. Box 672, Trinity, Texas 75862.

FAMILY PRACTITIONER WANTED TO ASSOCIATE with well established solo practitioner to handle patient overflow. Alternate weekend coverage, etc. Space available, reasonable. X-ray and full lab in building. Desire experienced FP with holistic approach. No hospital practice necessary. Please reply to Ad-652, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PRACTICE, GENERAL PRACTICE—Wanted immediately to join physician staff in rural community one-hour from Dallas-Fort Worth area. Extremely active practice with good benefits and an opportunity to enter into the corporation. Practice is with physicians clinic, 26-bed hospital, and 42-bed nursing home within the same building complex. Excellent arrangement for family practice. For further information contact Roger E. Marks, M.D., 817-897-2215 or 817-897-4436.

NEEDED: PHYSICIANS to practice at Mexia State School, located in central Texas just 30 minutes east of Waco. Many fringe benefits—retirement, sick leave, vacation, 40-hour week, group insurance. Salary range $34,300 to $37,300, depending on qualifications. An equal opportunity employer. Contact Medical Director, Mexia State School, P.O. Box 1132, Mexia, Texas 76667. 817-562-2821.

CLASSIFIED AD RATES & DATA: Classified Advertising sells for $10.00 per issue for 50 words or less, payable in advance. Ad numbers can be substituted for formal addresses upon request at no extra cost. Name and address of ad number listings can not be given out unless specific permission to do so has been given. The advertising office will not contact ad number holders except by mail. Copy deadline is the 5th of the month preceding publication. Send copy to Advertising Manager, TEXAS MEDICINE, 1801 North Lamar Blvd., Austin, Texas 78701.

EMERGENCY MEDICINE GROUP PRACTICE in Texas. Salary $44,000 with many fringe benefits. Send resume to Houston E.P.A., 8700 Commerce Park Drive, Suite 121, Houston, Texas 77036.

FAMILY PRACTITIONER FOR MULTISPECIALTY CLINIC in Houston's fastest growing Southwest area. Salary guarantee and early partnership. Excellent radiographic and diagnostic facilities in new clinic building adjacent to hospital. Contact Pierre Gendron, 6630 DeMoss, Houston, Texas 77074.

BOARD CERTIFIED AND/OR BOARD ELIGIBLE INTERNISTS: Board certified and/or board eligible internists sought for Chief and Deputy Chief, Department of Medicine, U.S. Public Health Service Hospital, Galveston, Texas and other areas of Gulf Coast. Affiliated with University of Texas Medical Branch in terms of medical student, intern and resident teaching. Employment in PHS Commissioned Corps, if eligible, or under Federal Civil Service System with liberal benefits and adherence to equal employment practices. For information call or write Thomas Shinnick, M.D., Director, U.S.P.H.S. Hospital, 4400 Avenue N, Galveston, Texas 77550; 713-763-1211.

GENERAL PRACTICE—SOLO PRACTICE: Rural area, progressive community, friendly people, excellent school system. Modern 30 bed hospital. One other doctor on active medical staff. Rent free office space. Good hunting and fishing. Contact Administrator, Throckmorton County Memorial Hospital, P.O. Box 487, Throckmorton, Texas 76083; 817-849-2151 or 817-345-3206, Dr. Luis A. Barranco.

WANTED: DIRECTOR, CITY-COUNTY HEALTH DEPARTMENT. Licensed to practice in Texas, M.D., M.P.H. Serving a population of 120,000 in North Central Texas. Reply to: Chairman, Board of Health, Wichita Falls City-Wichita County Public Health Center, 1700 Third Street, Wichita Falls, Texas 76301.

DALLAS AREA OPPORTUNITIES: Outstanding private practice opportunities exist for general internists and family practitioners in the suburban community of Plano, Texas. Plano's population has increased from 17,000 to over 46,000 in the last six years. Excellent schools, new 193 bed hospital, physician offices across the street. Be a part of this dynamically growing community. For further details call collect or write to: John C. Daniels, Director, Professional Relations, Plano General Hospital, 3901 West 15th Street, Plano, Texas 75075; 214-423-6800.

WANTED: INTERNIST TO JOIN busy solo internist in new office. Complete clinical laboratory facilities plus x-ray. City of 25,000 population in Northeast Texas. Drawing area of 100,000. Two new hospitals. High caliber medical community. Excellent recreational facilities; good schools and churches. Ideal family city. Please reply to Ad-625, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

EXCELLENT OPPORTUNITY FOR ONE OR TWO FPs. North Central Texas, small town, large lake. Large cities nearby. Exceptional recreation on doorstep. Clinic adjacent to new hospital. New schools, churches, homes. On-call time with three others. Solo or group. Salary guarantee. Growing area. Help needed badly. Please reply to Ad-663, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN WANTED: FAMILY CARE AND CHRONIC. Hospital facilities available ten miles. Clinic space available downtown Kemp. Pharmacy available. 45 miles southeast Dallas. Close to Cedar Creek Lake, fastest growing recreational-retirement area in Texas. Projected 100,000 population by 1980 in area. Country club, golf course, three miles. Excellent opportunity. Please reply to Edmund Horton, Ph., P.O. Box 449, Kemp, Texas 75143; phone 214-498-2011.

WANTED: LOCUM TENENS for 6 months to 18 months to help me in a busy general practice. Modern clinic, new 80 bed hospital. Present associate leaving Jan. 1st. Contact: M. A. Treadwell, M.D., Eastland, Texas; 817-629-2633.

WANTED: M.D. for busy downtown Houston industrial clinic, 4 man group. Partner retiring, May 1977. $48,000. Opportunity full partnership. Night/weekend calls to your liking. Position not filled by June '77 would consider locum tenens 2-8 months. Malpractice insurance paid. Under 40 years old. Please reply to Ad-667, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL PRACTITIONER WANTED in Ranger, Texas, location I-20 between Fort Worth and Abilene. New 36 bed hospital, new schools under construction, Junior College (EMT and LVN training). Lake Leon, 7 miles with country club. Call collect 817-647-1156.

GENERAL PRACTITIONER WANTED—Growing hospital in progressive East Texas town near metroplex needs an ambitious general practitioner to join staff. Community and hospital very cooperative in helping to establish your practice. Call (214) 845-2281, or write to Milton Bolgiano or Paul Bennett, Gladewater Municipal Hospital, 300 West Upshur, Gladewater, Texas 75647.

STAFF PHYSICIAN NEEDED FOR STATE HOSPITAL. Progressive 750 resident state institution. Eligibility for Texas licenses required. 40 hour work week, paid vacation, sick leave, holidays, good retirement plan, free group insurance. Kerrville is known as a retirement center. Prefer mature physician over age 50. Please contact Luther W. Ross, M.D., Superintendent, Kerrville State Hospital, P.O. Box 1468, Kerrville, Texas 78028 or phone 512-896-2211. We are an equal opportunity employer.

EXCELLENT OPPORTUNITY FOR YOU—MD, GP OR FP to replace physician who has moved. New 38 bed hospital, basic surgery, gyn, OB necessary. To associate with physician with quite a few years practice. Excellent character reference absolutely necessary. Contact T. R. Wilson, M.D., P.O. Box 47, Groesbeck, Texas 76642.

NEUROLOGIST: To work in conjunction with busy neurosurgeon associated with a growing regional medical center serving North Texas and Southern Oklahoma. Must be board certified or eligible and experienced in EEG and EMG. A variety of practice arrangements are available. Call Otmar W. Albrand, M.D., Denison, Texas, 214-465-6111 or 214-463-1693.

MEDICAL DIRECTOR: Houston plant, major chemical company with excellent preventive medicine program. Training in occupational medicine or internal medicine preferred. Benefits include malpractice insurance, society dues, retirement plan, savings plan, health insurance, 10 holidays, low cost life insurance. Send resume to Dr. Burdick, Ethyl Corporation, Box 472, Pasadena, Texas 77501.

NEED AN ASSOCIATE FOR BUSY FAMILY PRACTICE. Good facilities close to university. Stable solid agriculture economy with cotton, oil, cattle. Population 11,500, draws from 25,000. Six doctors — two on verge of retiring. Lucrative business for 22 years. Financial arrangement open and negotiable — salary, rental, share office, etc. Please reply to Ad-672, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

MEDICAL DIRECTOR: Rio Grande State Center for MHMR. Planning, administrating, and supervising treatment care programs. Texas licensable. Salary $39,900, fringe benefits, liability protection under Texas law. Alvaro Samaniego, M.D., Clinical Director, Rio Grande State Center for MHMR, P.O. Box 2668, Harlingen, Texas 78550; 512-423-5077. EOE.

WANTED: INTERNISTS, GENERAL OR WITH SUBSPECIALTIES in oncology and hematology or gastroenterology to practice with a sixteen member multispecialty association in East Texas. New building, nuclear medicine, linear accelerator therapy unit. Travis Clinic, P.O. Box 870, Jacksonville, Texas 75766, or call 214-586-2505.

COLLEGE PHYSICIAN WANTED: Full-time college physician needed immediately in liberal arts college of 1200 students to serve as: (1) physician in well-equipped campus health center for students, faculty, and staff, and some family members of faculty and staff; (2) instructor in team-taught interdisciplinary courses; (3) director of comprehensive advising program for health care professions; and (4) liaison to cooperating physicians and professional schools in health sciences. If desired, could gradually be phased into half-time college position plus local private practice. Compensation (including benefits) approximately $40,000/year. Contact Dr. Dan Bedsole, Austin College, Sherman, Texas 75090 or telephone 214-892-9101. An equal opportunity employer.

WANTED: FAMILY PRACTITIONER TO JOIN three man group. East Central Texas. New joint commission approved 30 bed hospital. Airport. New junior-senior high complex. Railroad division point. Small industry. Primary income ranching. Three fishing lakes. Deer, quail, dove hunting. Country club. No initial investment necessary. Contact Drs. Gage, Cox or Halbert, 315 Main Street, Teague, Texas 75860, 817-739-2561.

WANTED: PSYCHIATRIST/NEUROLOGIST to join growing multispecialty clinic with excellent facilities. New clinic building adjacent to new hospital. Contact Henry K. Butler, M.D., Malone and Hogan Clinic, 1501 West 11th Place, Big Spring, Texas 79720; telephone 915-267-6361.

OPPORTUNITY FOR OPHTHALMOLOGIST AND OTOLARYNGOLOGIST in Central Texas. Trade territory of 75,000-100,000. Only one ophthalmologist and no otolaryngologist following retirement of physician doing EENT. New hospital with 160 beds and all modern equipment. The need is great and the opportunity is unlimited. Contact Braswell Locker, M.D., Route 3, Box 184, Brownwood, Texas 76801.

ORTHOPEDIC SURGEON, board eligible or certified. Large major city. To associate with board certified orthopedic surgeon. Attractive financial arrangements can be made. Send curriculum vitae. Please reply to Ad-675, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

Situations Wanted

WE PRESENTLY HAVE SEVERAL PHYSICIANS, GPs and specialists on file who wish to practice in Texas on a salary basis, with a view to future partnership. How may we help? Medi-Search (recruiting physicians exclusively), 309 Wichita Title Building, Wichita Falls, Texas; 817-322-5269.

SITUATION WANTED: 36 year old ophthalmologist wishes to relocate in Texas. University of Toronto graduate 1965 with Canadian fellowship in ophthalmology 1969. Interested in general ophthalmology practice. Please reply to E. P. Sholdra, M.D.,F.R.C.S.(c), 120 Holland Avenue, Ottawa, Ontario, Canada K1Y0X7; telephone 1-613-729-4375.

CARDIOLOGIST: 33—FLEX. Echo and stress testing expertise. Knowledge of Spanish. Looks for hospital based or group practice. Available July 1977. Prefers South Texas, other areas considered. Please reply to Ad-664, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GENERAL SURGEON (Board certified, DABS), bilingual (Spanish and English). Texas license. Seeks association, partnership, group or hospital. Prefer South Texas. Contact Dr. Domingo Galliano, 720 West 170 St., New York, New York 10032.

CANADIAN FAMILY PRACTICE PHYSICIAN licensed in Texas, seeking location. Open to all opportunities—private, association, emergency room, etc. Please reply to Ad-669, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

GASTROENTEROLOGIST-INTERNIST: 33, foreign graduate, board eligible for internal medicine. University trained, experienced in all endoscopic procedures. Seeks solo, partnership, multispecialty group or hospital based practice. Will prefer moderate size community with average population of 100,000 or above. Please reply to Ad-670, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

LOCUM TENENS in radiology. Available preferably in Dallas or the area around Dallas. Contact J. Z. Vlasak, M.D., 3437 Longmeade Dr., Dallas, Texas 75234. Telephone 247-6417 or 376-5451, VA Dallas.

GENERAL AND TUMOR SURGEON, FECS(C), FACS. Age 47. Extensive training and experience in head and neck and general oncology. Currently in high volume practice in Academic Centre in Canada. Wishes to relocate in Texas or Southeast. Academic setting not essential. Please reply to Ad-671, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

FAMILY PHYSICIAN SEEKS OPPORTUNITIES as a GP in Houston area. Qualified 1961, solid medical background, well experienced, all-rounder. ECFMG certificate and other credentials available if necessary. Ready to emigrate to USA end 1977 but will be visiting Houston in January 1977 and will be available for interviews. Please reply to Ad-674, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

PHYSICIAN'S ASSISTANT: National board certified physician's assistant, Texas graduate, AMA accredited program. Employed one year in family practice residency program. Seven years prior experience in health associated fields. Desire position in family practice, general surgery, or internal medicine situation. Resume, curriculum vitae available. Walter Moss, 6912 Heritage, Fort Worth, Texas 76134; 817-293-7252.

SEEKING LOCATION: UROLOGIST, 36, Flex. Completing training in June 1977. Desires group, associate or solo practice. All areas considered. Available in July 1977. Please reply to Ad-673, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

For Sale or For Rent

OFFICE SPACE IN DALLAS — Office suites still available one block from Baylor Hospital in new Medical Center Building, 3801 Gaston Avenue, Dallas, Texas. Pharmacy laboratory in building. Generous allowance for office improvements. Planning and layout available without cost. Contact Joe Mistrot, (214) 328-2761, or write P.O. Box 18237, Dallas, Texas 75218.

FOR SALE OR LEASE—Beaumont, Texas. Medical office and practice, one or two doctors; prosperous port, petrochemical industry, shipbuilding and steel plant. One billion dollars capital investment in area last six months; hub of regional rice growing and cattle raising. Population 130,000; state university, new public library and public transportation system; 85 miles from Houston. Suitable for all specialties; prefer GP or internal medicine. Contemporary, prize winning design; new roof, air conditioning and painting; 2973 sq. ft., soundproofed interior walls. Ample parking, including adjacent rental property. Practice 25 years old, 17 years same location. Unlimited income potential, especially with OB or surgery. Price includes practice, furnishings, adjacent lot and rental property. Owner retiring. Texas license required. Terms available for sale or lease. Please reply to Ad-659, *Texas Medicine*, 1801 North Lamar Blvd., Austin, Texas 78701.

AUSTIN—NEW PROFESSIONAL PARK. Internist, GP, FP, Peds, OB/GYN sought to associate in group setting for solo practice. Physician population has not kept pace with accelerated growth. University town, new hospital. Call or write: Cannon Professional Park c/o 3913 Medical Parkway, Austin, Texas 78756. Telephone 512-451-8489.

KING STATION, specialized shopping center planned for 7 acre tract at Walnut Street & King Lane in north Garland. Medical and retail shops. Oriental stucco canopied with 8-ft. covered walkway; wood columns; heavily landscaped. Central access road. Two hospitals stone's throw away. Call Metro Leasing & Management, 214-276-6933.

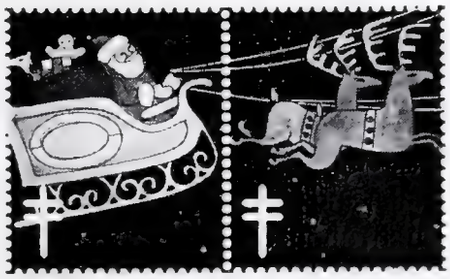
GARLAND MEDICAL & PROFESSIONAL BUILDING—Connected by corridor to Garland Community Hospital. Two-story beautiful new building now leasing. 1200 and 1500 sq. ft. suites. Call Metro Leasing & Management, 214-276-6933.

NEW ULTRA-MODERN, cedar and glass office space for lease in Northwest San Antonio, one block from loop 410 and one exit from IH 10. Across the road from Park North Hospital, the building is divided into six separate office spaces, four of which are occupied by 4 general dentists, one orthodontist, and three oral surgeons. Up to 4700 sq. ft. available at 60c sq. ft. with a very liberal allowance to finish out to your specifications. Ideal situation for the family practitioner or pediatrician. Contact Mossrock Venture, 2803 Mossrock, Suite 201, San Antonio, Texas 78230.

Miscellaneous

ABORTION ALTERNATIVES! Licensed maternity service offers residential and non-residential program with medical care and counseling for the expectant mother. We have one thousand waiting adoptive couples of all faiths. Costs adjusted to ability to pay. Home of the Holy Infancy, 510 West 26th Street, Austin, Texas 78705. Phone 512-472-9251.

Christmas Seals
Fight Lung Disease



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Editorials

IMAGES OF MEDICINE'S PAST

Both studies of the past and experiences of the present are needed for a full understanding of the human predicament. A student of history can know more about the past than did those contemporary with the past events he is studying. A student of history can also know more about the present than those of his contemporaries who ignore the past. Recognizing this throughout its history, the Texas Medical Association has supported numerous efforts to understand the history of medicine in Texas; recall the centennial issue of the *Texas State Journal of Medicine* (May 1953) and the centennial annual session issue of *Texas Medicine* published in March 1967. It seems highly appropriate for historians and physicians to continue this legacy as the bicentennial era evolves.

In keeping with the spirit of this era, two essays are presented in this issue of *Texas Medicine*. Dr Frederick Sargent tells the story of Dr Isaac Cline and his efforts to understand relationships between weather and health. Mr Maury Darst depicts some of the highlights of physicians' responses to the railway system developed to serve Galveston in the latter part of the 19th century. These are only two of the many aspects of the history of medicine in Texas which deserve exploration.

Every physician in Texas has some image of medicine's past. These images are refined and enlarged by rekindling memories about practitioners now dead, practices now forgotten, and policies once claimed. These reformed images—historical understanding—can then help us deal with the complexities of present changes and with our fears about medicine's failure. We hope that these and other important purposes will be served by the historical essays written for *Texas Medicine*. Readers are invited to send their comments about the articles in this issue, and suggestions for other essays.

Chester R. Burns, MD, PhD, Galveston.

P. R. OVERTON RETIRES AFTER 37 YEARS AS TMA GENERAL COUNSEL

Retirement has taken the title, "General Counsel for Texas Medical Association," from Philip R. Overton, LLB, after an eventful 37-year stint at the legal helm, but his legacy of years and unlimited energy will not be forgotten.

His concentrated efforts have become an integral part of the TMA's past and a foundation for its future, and we are fortunate indeed to have had our problems in the hands of such a man as Phil Overton.

The promotion of public health, delivery of quality medical care, and the concept of the "health team" were his main goals during his vigorous and illustrious career.

In the early 1930's, health laws in Texas as we know them today were practically nonexistent. Many diseases were preventable but there were no specific laws for their control. One of Mr Overton's earliest contributions was the establishment of sanitation laws. He was not alone in this battle. With the help of interested physicians, hospitals, and local and state health officials, he brought about a Sanitary Code that established minimum standards and requirements of sanitation. This code covered everything from toilet facilities and garbage to drinking water and the handling of food—anything which promoted cleanliness to preclude the transmission of disease.

While one hand skillfully and knowledgeably guided the Sanitary Code, the other was setting things in order to amend the Medical Practice Act to assure Texans that those who aspired to practice the healing arts in our state were qualified by education and training to treat the sick.

To further his idea of a health team and a team effort, he persuaded Texas hospitals to come together and form an association for the exchange of information and better delivery of hospital care. For a quarter of a decade, he served ably as general counsel for the Texas Hospital Association.

In the aftermath of the Great Depression, many of our people were unable to afford adequate food, much less hospital and medical care. Along with other leaders in the health field, he pushed forth the concept of prepaid medical and hospital care in Texas, as originally outlined by J. F. Kimball, MD, of Dallas, by taking out a charter for Group Hospitalization Service to do business in our state. This organization we now know as Blue Cross-Blue Shield, and Mr Overton also served as its general counsel.

In the unique position of counsel for the doctors, the hospitals, and Blue Cross, he then had the support which is so necessary to carry forth proposals to the Legislature, and was successful through the years in introducing numerous bills desired by these groups in the interest of better health care.

With burning desire for the continuing improvement of health in Texas, Mr Overton made it a point never to be too busy to serve on worthwhile committees or to work with health associations. He devoted many years' service as a member of the board of directors of the Texas Tuberculosis Association, and, in natural sequence, later accepted appointment to the Governor's Special Committee for the Eradication of Tuberculosis. With the support of the Special Committee, the Texas Tuberculosis Association, physicians, hospitals, and the Texas State Department of Health, he was assigned the task of recodifying and enlarging existing laws pertaining to tuberculosis, which culminated in the enactment of the Texas Tuberculosis Code.

Mental health was another long-neglected area deserving of the attention of the health team, and Mr Overton was appointed to the Governor's Committee for Mental Health Planning. Mr Overton, supported by the committee, physicians, hospitals, and Texas State Department of Mental Health and Mental Retardation, was instrumental in the final drafting and enactment of the Mental Health Code—a labor of several years.

Every two years throughout his long and dedicated career, Mr Overton was before the Texas Legislature to carry out the wishes of the organizations with which he was allied in amending and updating legislation affecting health.

The son of a beloved pioneer Lubbock physician, M. C. Overton, MD, he was medically oriented and keenly aware of the health needs in our state. His lifetime career has been almost totally devoted to health.

Devotion to ideals does not cease with an announcement of retirement, and after having Mr Overton "in the saddle" for so many years, it is comforting to know that if we need an extra hand to help with future health legislation, he will ride with us again.

Joe T. Nelson, MD, Weatherford,
TMA Board of Trustees.

Can we, as victims, help cure high costs?

"Just what are you doctors going to do about these high prices? It's getting so that plain folks can't afford to get sick anymore!"

How I wish I had a nice sugar-coated pill guaranteed to cure *that* misery! And some strong pain-killers for my colleagues who say the financial squeeze hurts so much that plain doctors can't afford to practice medicine anymore.

The fact is, however, that the physician, like the patient, is the victim of federal policy and federal health program expansion, and little can be done until the federal government is prepared to act responsibly in these areas.

That is what I stated to the Council on Wage and Price Stability when it held a public hearing in Houston late in October, and I think it's true. Costs for physicians' services *follow* the upward climb of charges for health services, but they don't lead it.

The government's own General Accounting Office has formally reported that the primary reasons for cost escalation in Medicare and Medicaid are inflation and the government expansion of its health programs.

Proportionately, Americans now spend 4% fewer health care dollars for physicians' services than they did ten years ago. At the same time, general inflation and soaring professional liability insurance rates have greatly increased the overhead costs of practicing medicine.

In short, physicians really can't solve the problem of high costs, but we can examine customary procedures and explore others which might be equally appropriate but less costly.

For example, we favor and support use of ambulatory care facilities instead of traditional hospital facilities when such an alternative is suitable for the patient. Also, we can fight for acceptable solutions to the professional liability insurance crisis at the state level so that we can stop practicing defensive medicine—that would save our patients a lot of money and allow us to spend more time taking care of sick people.

On the national level, the AMA has convened a Commission on the Cost of Medical Care, and that group should pinpoint several more possibilities for reducing costs.

One of the most important things we can do is to oppose more government control. After all, controlled health care systems have as many cost problems as we have, or more, and in addition they have trouble maintaining quality and quantity of personnel and facilities.

We must do what we can to control costs, but we must not let anyone toss us the whole burden to carry alone.

L. S. Thompson Jr. M. D.

L. S. Thompson, Jr, MD, President,
Texas Medical Association.

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